November 2011

Food Outlook

Global Market Analysis

INTRODUCING AMIS

FOCUS

In spite of improved supply prospects and weakening demand, agricultural commodity market conditions remain fairly tight, which is the major factor underpinning prices. Production forecasts for nearly all key food crops in 2011 have risen steadily since the previous report in June. For cereals, while the forecast for ending stocks in 2012 has also been revised up significantly, larger anticipated inventories reflect not only improved production prospects but also expectations of a slowing demand growth because of the unfavourable macroeconomic environment. In spite of these developments, however, international prices of all commodities covered in this report continue to be high and, in most cases, above the previous year. Strong underlying demand in certain countries, where economic growth is robust, is price supportive. Aside from being high, most prices are also extremely volatile, moving in tandem with unstable financial and equity markets. Fluctuations in exchange rates and uncertainties in energy markets are also contributing to sharp price swings in agricultural markets.

Given all these uncertainties, it is difficult to predict how markets will evolve in the near-term. While there is some room for optimism that, for most commodities, prices could remain below their recent highs, the general picture still points to firm markets well into 2012. For most food commodities, next year's production will have to increase in order to meet the expected demand, albeit moderately. However, if this demand were to rise faster than currently envisaged, which is a possibility even assuming a slow economic recovery, then a more significant production expansion will be required. The question therefore is: do the current market signals convey the correct information for producers to adjust their production plans for next year? More critically, will there be enough time for an adequate production response in the event of an unexpected surge in demand? Input costs, from fertilizers to energy, remain high, interest rates have climbed in many emerging economies, all of which could dampen production next year and, hence, draw down stocks and boost prices further. This year's global food import bill is expected to approach USD 1.3 trillion, with the cost of food purchases for the Least Developed Countries (LDCs) soaring by over a third from last year.

Reducing market uncertainty may not be among the fastest remedies for lowering the number of hungry. Yet, letting international markets continue in their present state, volatile and unpredictable, will only aggravate an already grim outlook for world food security. This is the reason why world leaders have been dwelling at length on the issue of price volatility since the start of the year. Such discussions gained momentum in recent months as attention turned towards finding ways to improve the accuracy of supply and demand forecasts for major food crops as an important first step in promoting stable and transparent food markets.

In June 2011, the Group of 20 (G-20) established a global information system under the banner of Agricultural Market Information System (AMIS). This initiative, proposed by a number of international organizations, has been endorsed by all G-20 Members and, subsequently, by the Committee on World Food Security (CFS). This issue of Food Outlook also introduces AMIS by explaining how it came about, its structure and objectives.

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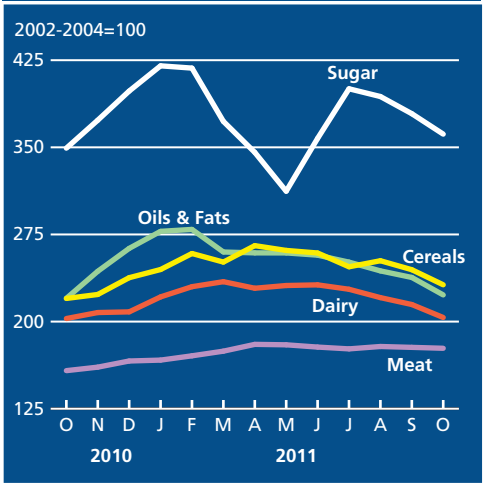

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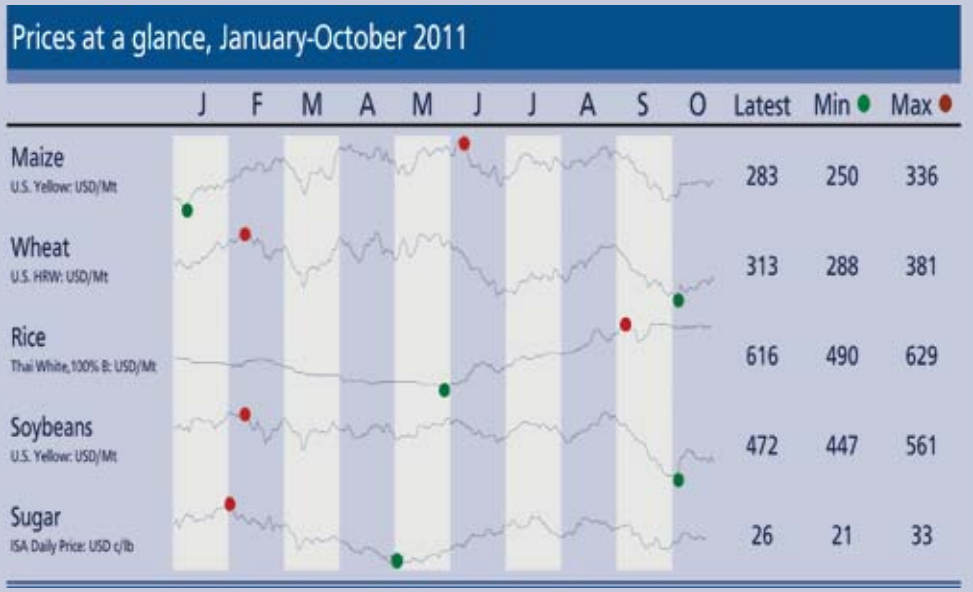

Acknowledgements

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Cereal market summary

The outlook for the global cereal supply in the 2011/12 marketing season has improved slightly since the beginning of the season as production forecasts are adjusted upwards and demand expectations point to less robust growth than had been anticipated because of macroeconomic concerns in developed economies.

FAO's latest forecast for 2011 world cereal production confirms a record output of 2 325 million tonnes, up 3.7 percent from the previous year. The overall increase comprises a 6.0 percent rise in wheat production, a 2.6 percent growth in the global coarse grains harvest and a 3.4 percent rise for rice production. The global wheat crop turned out larger than forecast at the onset of the season following better than expected recovery in the Commonwealth of Independent States (CIS) from their drought-reduced harvests of 2010. Also for rice, prospects for this year's crop have improved in the main paddy producing countries in Far East Asia as the season has advanced, leading to the latest expectations of relatively strong production growth in spite of the devastating floods in several countries in South East Asia. For coarse grains, early season forecasts had pointed to a large increase, but adverse dry conditions in the United States, the world's leading producer, have resulted in a smaller than previously predicted global output.

Total cereal utilization in 2011/12 is forecast to reach 2 309 million tonnes, 1.6 percent up from 2010/11. Globally, cereal food consumption is forecast to keep pace with population growth. In spite of slower economic recovery and increasing recession fears in many developed countries, total feed utilization is forecast to resume growth after two seasons of stagnation, rising by 1.7 percent to 780 million tonnes. Strong demand from the livestock sectors in the leading emerging economies is the main driver behind this increase. By contrast, the growth in industrial usage of cereals is expected to be more subdued largely because of stagnating maize-based ethanol production in the United States, the world's largest producer.

The forecast for world cereal ending stocks has been raised, although coarse grain inventories are expected to remain low. World cereal inventories are forecast to increase by 3.3 percent from their opening level, to 507 million tonnes by the end of seasons in 2012.

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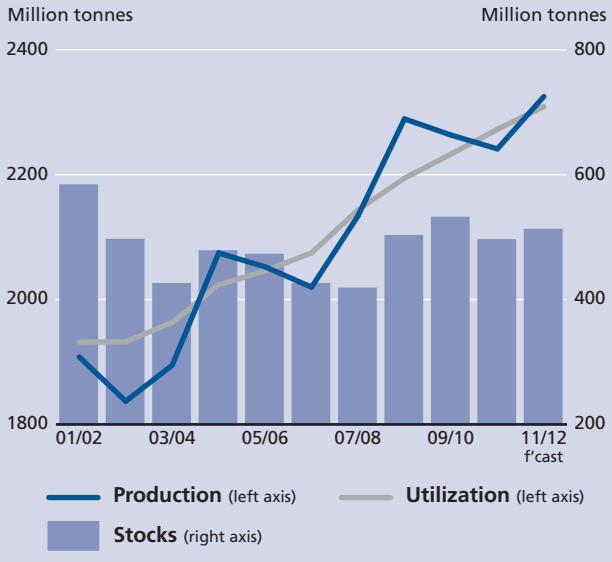
World cereal market at a glance[1]

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**2 263.5**	**2 241.3**	**2 325.1**	**3.7**
Trade[2]	**277.4**	**282.1**	**284.5**	**0.9**
Total utilization	**2 232.9**	**2 272.7**	**2 308.6**	**1.6**
Food	1 038.1	1 058.0	1 072.2	1.3
Feed	766.8	766.6	779.8	1.7
Other uses	428.0	448.2	456.6	1.9
Ending stocks	**526.2**	**490.4**	**506.6**	**3.3**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	152.0	153.0	153.3	0.2
LIFDC[3] (kg/year)	156.3	157.9	159.1	0.8
World stock-to-use ratio (%)	**23.2**	**21.2**	**21.6**	
Major exporters stock-to-disappearance ratio (%)	**18.6**	**15.7**	**16.2**	

FAO CEREAL PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010
				%
	174	183	252	45.4

[1] Rice in milled equivalent.
[2] Trade refers 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



Wheat market summary

A record crop in 2011 will likely boost world wheat supply well above anticipated demand in 2011/12, leading to a recovery also in the level of stocks. The latest FAO outlook indicates a much larger harvest than expected at the start of the season, with global wheat production forecast to increase 6 percent above last year's level. Although, as the season progressed, crop prospects deteriorated in some major producing countries, such as the United States and some EU countries, the recovery in production in the CIS from the drought-reduced level of 2010 has turned out even sharper than predicted, more than offsetting the downward revisions elsewhere. Looking ahead, the winter wheat planting conditions in the northern hemisphere, for harvest in 2012, are generally favourable with the exceptions of the United States, where prolonged dryness in southern parts is hampering field work, and Ukraine, where conditions are also adversely dry. The latest indications point to a 2.2 percent increase in global wheat utilization in 2011/12, driven by more competitive prices boosting feed use, especially in China, the EU and the United States. In spite of higher usage, world wheat stocks are also likely to register a strong expansion, up 8 million tonnes from their reduced opening level, resulting in an increase in world stocks-to-use ratio from 26.7 percent in 2010/11 to 28.2 percent in 2011/12.

World wheat trade is forecast to expand by 4.4 percent in 2011/12. A sharp recovery in export availabilities in the CIS countries is the main feature of the 2011/12 marketing season. In the Russian Federation, this year's recovery in domestic production and the removal of export restrictions could push up exports to 18.5 million tonnes, close to the record in 2008/09. The much improved supply outlook has encouraged many exporting countries to relax or lift export restrictions, a development which has put further downward pressure on international prices in spite of a stronger outlook for world imports and expectation of faster growth in wheat utilization. At around USD 302 per tonne, the average international wheat price for the month of October was sharply below its USD 364 per tonne level in April 2011 and its USD 482 per tonne peak in March 2008.

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World wheat market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**684.7**	**651.8**	**691.0**	**6.0**
Trade[1]	**130.1**	**125.5**	**131.0**	4.4
Total utilization	**657.2**	**667.4**	**681.9**	**2.2**
Food	463.5	468.8	473.6	1.0
Feed	120.3	124.0	130.9	5.6
Other uses	73.4	74.5	77.4	3.9
Ending stocks	**198.8**	**181.9**	**189.7**	**4.3**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	67.9	67.8	67.7	-0.1
LIFDC (kg/year)	54.2	54.1	54.4	0.6
World stock-to-use ratio (%)	**29.8**	**26.7**	**28.2**	
Major exporters stock-to-disappearance ratio[2] **(%)**	**21.4**	**17.6**	**19.0**	

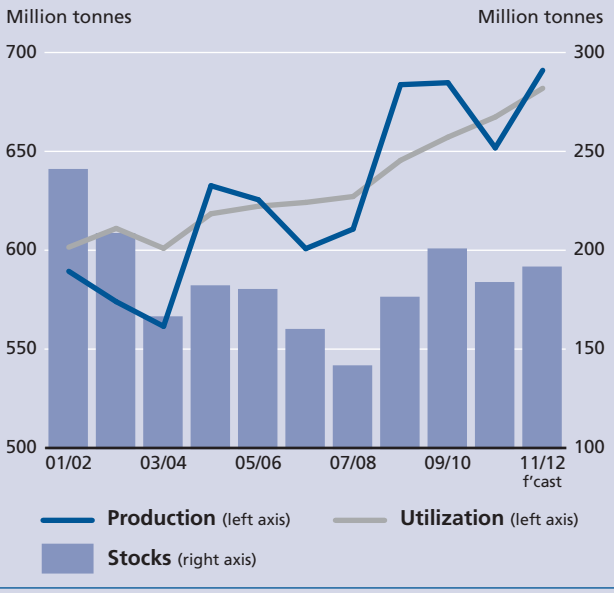
FAO WHEAT PRICE INDEX[3] **(2002-2004=100)**	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	154	169	232	50.9

[1] Trade refers to exports based on a common July/June marketing season.

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

[3] Derived from International Grains Council (IGC) wheat index.

Wheat production, utilization and stocks



Coarse grain market summary

Among all the cereals, the impact of macroeconomic uncertainties in many developed countries is likely to be most pronounced on coarse grain markets, maize, in particular. This is primarily because feed and fuel, the two leading demand sources of coarse grains in major industrial countries, are extremely responsive to economic conditions. Mostly driven by this factor, FAO's latest forecast for total utilization of coarse grains has been adjusted downward to 1 155 million, down 19 million tonnes from FAO's first forecast in June and now only 0.9 percent higher than in 2010/11, compared with 1.4 percent anticipated earlier.

This expectation of very slow growth in world demand for coarse grains is expected to help alleviate some of the earlier supply concerns given the latest world production forecast of 1 152 million tonnes for 2011. Although 2.6 percent higher than 2010, it still barely matches the current forecast for total utilization. Consequently, while the prospects for this season's ending stocks have improved compared with the expectation earlier in the season, still no recovery is expected in the global level of inventories.

World trade in coarse grains is expected to stagnate at nearly 120 million tonnes in 2011/12, partly reflecting a shift of import demand towards feed wheat, which is increasingly competing with coarse grains in feed rations. As a result, international prices have come under downward pressure although they are still at least 15 percent above the previous year's high level. A faster recovery in economic conditions can inverse the recent downturn in prices, as markets will again focus on the overall supply situation, which remains very tight.

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World coarse grain market at a glance

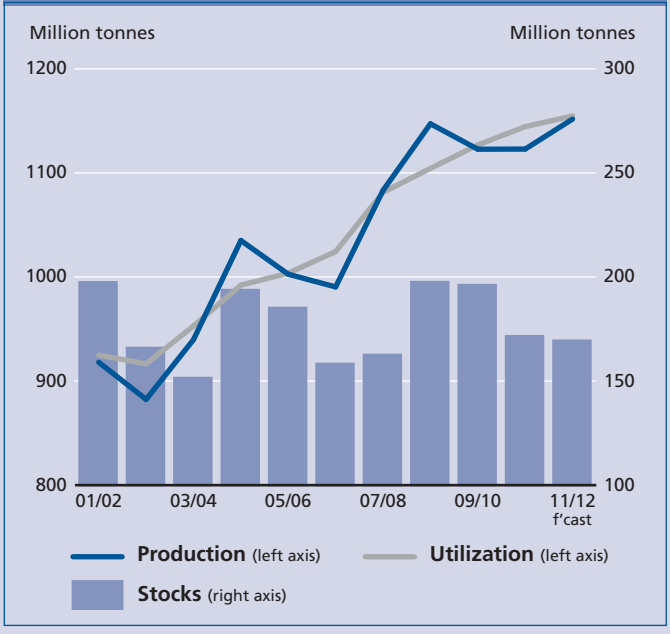
	2009/10	2010/11 *estim.*	2011/12 *f'cast*	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**1 122.8**	**1 122.9**	**1 151.8**	**2.6**
Trade[1]	**115.8**	**122.6**	**120.0**	-2.1
Total utilization	**1 126.9**	**1 144.5**	**1 154.7**	**0.9**
Food	192.1	199.4	200.8	0.7
Feed	634.7	630.6	636.6	1.0
Other uses	300.0	314.5	317.4	0.9
Ending stocks	**194.7**	**170.1**	**168.0**	**-1.2**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	28.2	28.8	28.7	-0.3
LIFDC (kg/year)	37.0	38.2	38.1	-0.3
World stock-to-use ratio (%)	**17.0**	**14.7**	**13.9**	
Major exporters stock-to-disappearance ratio[2] **(%)**	**14.9**	**10.5**	**8.6**	

FAO COARSE GRAIN PRICE INDEX (2002-2004=100)	**2009**	**2010**	**2011** *Jan-Oct*	**Change: Jan-Oct 2011 over Jan-Oct 2010** %
	157	176	284	79.8

[1] Trade refers 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

In spite of severe flooding undermining crop prospects across Asia again this year, especially in Thailand, expectations of bumper harvests in the five major producing nations are forecast to boost world rice production in 2011 to a new record. If confirmed, world rice output this season would be up by 3.4 percent and more than sufficient to meet consumption needs, even allowing an accrual of world rice reserves for the eighth consecutive year.

Stronger import demand by countries in Asia and Africa has sustained the expansion of international trade to a new high in 2011. As for next year, prospects for good crops in some key importing countries may translate into a small decline in global trade volume. However, recent policy changes by two of the key market players, India and Thailand, have heightened market uncertainty.

Global rice utilization is predicted to increase by 2.4 percent in 2012, driven by larger food demand. On a per capita basis, this is expected to rise by 1 percent to 57 kg per year, in spite of prevailing high, or even rising, retail prices in many countries, which have triggered a series of government responses to keep food inflation in check. Damage to rice held in storage caused by floods in several Asian countries since August also boosted post-harvest losses.

International rice prices have resumed an upward trend since June 2011, reflecting first a tightening of the market and, subsequently, the announcement of a new price policy by Thailand, plus concerns about the effects of the Southeast Asia floods on export availabilities and shipping logistics. India's relaxation of its export ban on regular rice has contributed to dampening the upward pressure on world prices in October.

STOP PRESS – INDONESIA RICE PRODUCTION

On 1 November, Indonesia downgraded its 2011 production forecast by about 2 million tonnes (milled basis), which may result in larger imports than anticipated and add upward pressure to prices. The forthcoming FAO Rice Market Monitor will assess the implications.

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World rice market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**456.0**	**466.6**	**482.4**	**3.4**
Trade[1]	**31.5**	**34.0**	**33.5**	-1.5
Total utilization	**448.8**	**460.9**	**471.9**	**2.4**
Food	382.4	389.8	397.8	2.1
Ending stocks	**132.7**	**138.4**	**149.0**	**7.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	56.0	56.4	56.9	0.9
LIFDC (kg/year)	65.2	65.6	66.6	1.5
World stock-to-use ratio (%)	**28.8**	**29.3**	**31.8**	
Major exporters stock-to-disappearance ratio[2] **(%)**	**19.5**	**18.8**	**20.9**	

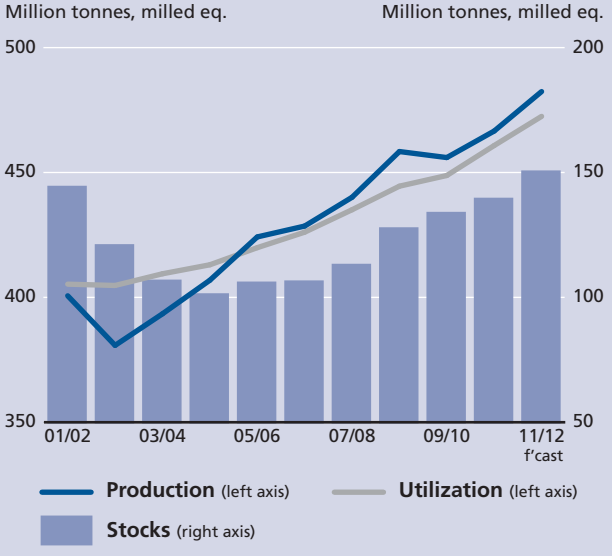
FAO RICE PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	253	229	252	12.5

[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

Global cassava output in 2011 is expected to rise by over 6 percent from last year and to surpass 250 million tonnes for the first time. The expansion is being driven by increasing industrial applications of cassava in Southeast Asia, especially ethanol, in parallel with rising food demand in Africa, which confirmed the importance of the crop to the food security of many countries in the continent. These trends underscore a growing geographical divide between the contrasting roles of cassava in the agricultural economy of the two regions

In spite of the brisk production growth, world trade in cassava products, entirely sustained by industrial demand, is set to undergo an overall contraction in 2011. This is the result of continued production problems in Thailand, the world's leading international supplier of cassava products. With rising scarcity, reflected in steep rises in Thai quotations in the first half of the year, the industry began to source alternative, more competitive feedstocks, especially grains. The slump in demand for cassava products resulted in considerable falls in quotations since May.

Prospects for 2012 point to a continued expansion of production in Africa, where cassava remains a strategic crop for both food security and poverty alleviation. In Asia, however, the outlook remains far from certain and is being strongly guided by highly competitive procurement by industrial sectors. Prospects for growth in the region will therefore depend on how the relative price between maize and cassava evolves, and also between sugar cane as a substitute in the production of ethanol. Adding to the region's uncertainty is the production outlook for Thailand. With international demand tapering off, domestic root prices have weakened substantially in recent months, casting doubt on the degree of incentive for producers to plant cassava next year. Some respite to the regional production outlook comes from rapidly growing sectors in neighbouring countries, such as Cambodia, Lao People's Democratic Republic and Viet Nam, especially in their ability to compete in the market place with falling international quotations of cassava and substitute products.

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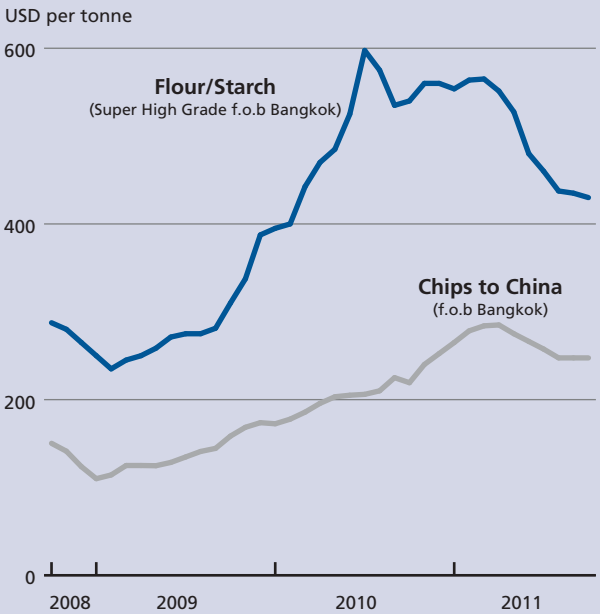
World cassava market at a glance

	2009	2010 *estim.*	2011 *f'cast*	Change: 2011 over 2010
	million tonnes, fresh root eq.			*%*
WORLD BALANCE				
Production	**241.9**	**237.9**	**250.2**	**5.2**
Trade	**25.6**	**23.2**	**22.8**	**-1.8**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	17.1	16.9	17.7	5.2
Developing (kg/year)	21.5	21.2	22.2	5.2
LDC (kg/year)	68.1	70.4	73.6	4.5
Sub-Saharan Africa (kg/year)	105.5	108.4	113.1	4.3
Trade share of prod. (%)	10.6	9.8	9.1	-6.6

FAO CASSAVA PRICES[1] (USD/tonne)	**2009**	**2010**	**2011** *Jan-Oct*	**Change: Jan-Oct 2011 over Jan-Oct 2010** *%*
Chips to China (f.o.b. Bangkok)	137	208	265	32.7
Starch (f.o.b. Bangkok)	281	507	500	0.8
Thai domestic root prices	41	79	80	5.3

[1] Source: Thai Tapioca Trade Association.

International cassava prices (October 2008 - October 2011)



Oilseeds market summary

Although likely to exceed last season's record, global oilcrop production in 2011/12 is forecast to grow marginally, with a year-on-year decrease expected for two major oilcrops, soybeans and rapeseed. Growth in global supplies of oils and meals could still be somewhat higher, thanks to ample carry-in stocks from 2010/11. However, with steady expansion in demand for oilseed products, a tightening in the world supply and demand balance seems inevitable. As to international prices for oilcrops and derived products, changes in the short-term prospects and spill-over effects from other markets have led to downward trends in recent months. However, with the onset of the new season, the market should be increasingly driven by the outlook for 2011/12. The anticipated tightening in global supply and demand seems to call for a gradual strengthening in prices of both oils and meals. As the season unfolds, the market will face a drawdown in global inventories as well as a reduction in overall stock-to-use ratios, the reverse of the past two seasons. Furthermore, new risks arise from the fact that global import demand will depend heavily on future supplies from Latin America and the Caribbean. Developments outside the oilseed complex are also adding uncertainty, in particular, the evolution of prices of feedgrain and mineral oil markets and renewed fears of a global economic recession, which could reduce overall commodity demand.

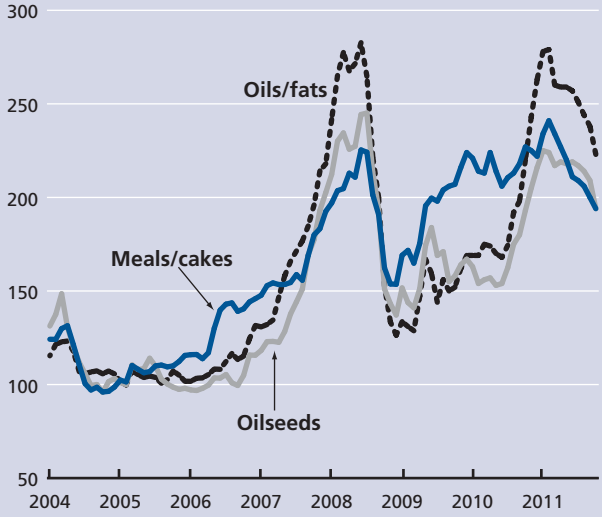
World oilseed and product market at a glance

	2009/10	2010/11 *estim.*	2011/12 *f'cast*	Change: 2011/12 over 2010/11
	million tonnes			*%*
TOTAL OILSEEDS				
Production	456.7	469.9	472.0	0.4
OILS AND FATS				
Production	172.7	178.6	181.3	1.5
Supply	196.1	204.9	209.8	2.4
Utilization	169.9	175.2	183.6	4.8
Trade	89.4	90.7	94.4	4.1
Stock-to-utilization ratio (%)	*15.5*	*16.2*	*14.5*	*-10.5*
MEALS AND CAKES				
Production	114.1	117.3	116.9	-0.3
Supply	128.1	136.3	137.6	1.0
Utilization	107.8	113.8	119.1	4.7
Trade	67.0	69.3	72.3	4.3
Stock-to-utilization ratio (%)	*17.6*	*18.1*	*15.1*	*-16.6*

FAO PRICE INDICES (Jan-Dec) (2002-2004=100)	**2009**	**2010**	**2011** *Jan-Oct*	**Change: Jan-Oct 2011 over Jan-Oct 2010** *%*
Oilseeds	161	172	218	34.9
Meals/cakes	194	217	220	2.5
Oils/fats	150	193	258	46.3

Note: Refer to table 10 for further explanation 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

According to the latest FAO forecasts, world sugar production may reach 173 million tonnes in 2011/12, an increase of 4.1 percent over the 2010/11 season. For the second consecutive year, global production is anticipated to surpass consumption, with a surplus in the order of 7 million tonnes, much larger than last year's. The increase in production is largely attributed to significant expansion in area and input use, prompted by strong international sugar prices over the past two years, and a return to a normal weather pattern.

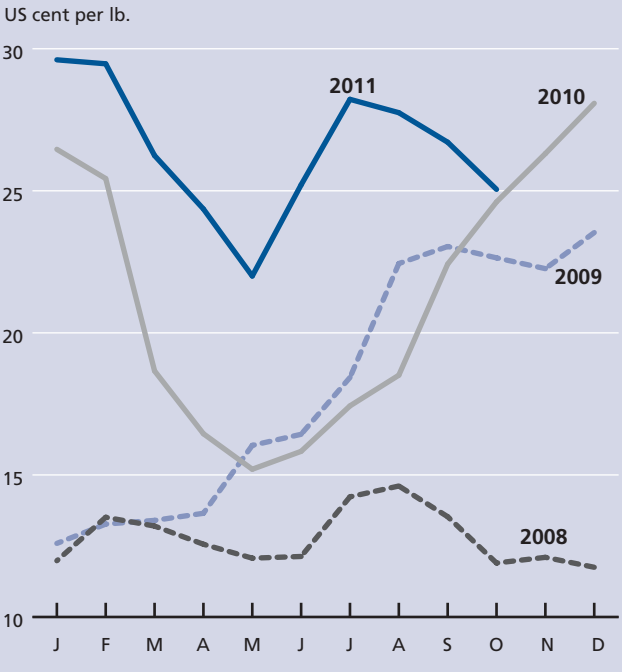
Growth of world sugar utilization is set to recover from 2010/11, as the lower domestic prices expected for 2011/12 should boost sugar intake in several emerging and developing countries. However, a deterioration of the global economic outlook could curtail demand growth. Larger supply availabilities in several traditional importing countries are also likely to depress world import demand and result in a 6 percent decline in world trade. Against this backdrop, international sugar prices may weaken further in the course of the season, although demand for stock rebuilding is likely to provide some price support.

World sugar market at a glance

	2009/10	2010/11 *estim.*	2011/12 *f'cast*	Change: 2011/12 over 2010/11
	million tonnes			*%*
WORLD BALANCE				
Production	**156.7**	**166.3**	**173.1**	**4.1**
Trade	**58.1**	**51.3**	**48.1**	-6.1
Total utilization	**162.6**	**164.1**	**166.6**	**1.5**
Ending stocks	**54.8**	**56.5**	**62.3**	**10.3**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	23.8	23.8	23.8	0.4
LIFDC (kg/year)	16.3	16.0	16.1	0.2
World stock-to-use ratio (%)	**33.7**	**34.4**	**37.4**	

ISA DAILY PRICE AVERAGE (US cents/lb.)	**2009**	**2010**	**2011** *Jan-Oct*	Change: Jan-Oct 2011 over Jan-Oct 2010 *%*
	18.1	21.2	26.5	31.8

International Sugar Agreement (ISA)



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Meat and meat products market summary

The global meat market in 2011 continues to be characterized by drought and disease-depleted animal inventories in many countries as well as constrained sector profitability in others, as input prices remain particularly high. Limping upwards, global meat output is set to rise by only 1 percent, half the previous year output gains, to 295 million tonnes. More than three-quarters of the year-to-year growth will originate in Brazil and China, the suppliers of nearly 40 percent of global output. Among the various meat categories, the retention of animals for herd rebuilding is constraining output of both bovine and sheep meats, while high production costs and diseases are dampening growth in the poultry and pig meat sectors.

Notwithstanding the imposition of trade barriers, vigorous import demand especially from Asian countries and in the Russian Federation is expected to lift trade in meat products by nearly 4 percent to 27.4 million tonnes, with the increases most pronounced for pig and poultry meat.

In April 2011, the FAO meat price index rose to a record 180 points, the highest level registered in the more than 20 years the price index series has existed. Since April, prices have eased somewhat, as reflected in the FAO meat price index, which slipped 3 points to 177 by October 2011.

Meat prices remain persistently high. In January-October they averaged 17 percent more in 2011 than in 2010 with year-to-year gains the highest for sheepmeat, up 36 percent, followed by bovine and poultry meats, up respectively by 18 and 16 percent. While high prices and sluggish economic growth have constrained global per capita meat consumption to an average 42 kg per capita, relatively low prices have accelerated the shift of consumers towards poultry, mainly at the expense of beef.

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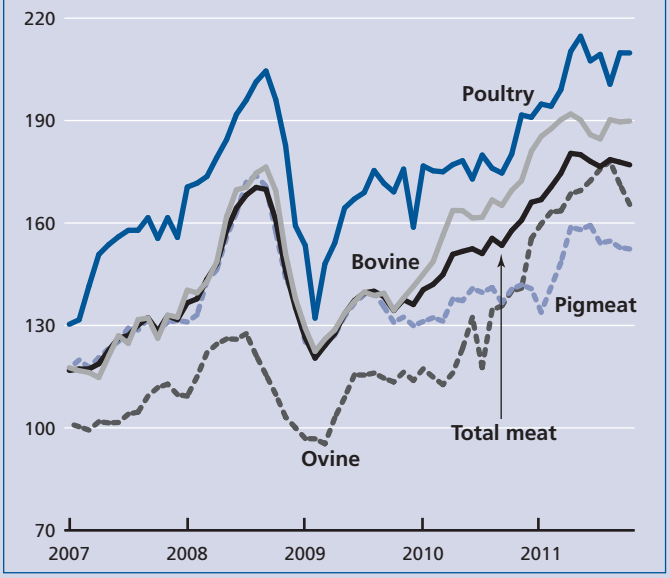
World meat market at a glance

	2009	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes			%
WORLD BALANCE				
Production	**283.6**	**290.8**	**294.7**	**1.3**
Bovine meat	65.0	65.0	64.6	-0.5
Poultry meat	93.6	98.1	101.1	3.1
Pigmeat	106.3	109.2	110.2	0.9
Ovine meat	12.9	13.0	13.0	-0.1
Trade	**25.2**	**26.5**	**27.4**	**3.6**
Bovine meat	7.2	7.6	7.6	0.9
Poultry meat	11.1	11.6	12.1	3.7
Pigmeat	5.8	6.1	6.6	7.9
Ovine meat	0.9	0.8	0.8	-2.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	41.4	42.0	42.1	0.1
Developed (kg/year)	78.4	78.6	78.3	-0.4
Developing (kg/year)	31.1	31.9	32.2	0.8

FAO MEAT PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	133	152	175	15.9

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



Dairy market summary

Following a peak in the first quarter of 2011, prices for most dairy products fell back for the remainder of the year. The price slide reflected a rise in export availability and a fall in the value of the Euro in relation to the US Dollar since July, which promoted competition among exporters, as import demand remained firm.

World milk production in 2011 is forecast to grow by 2 percent to 728 million tonnes. Most of the increase will come from developing countries, in particular Argentina, China and India. Output of milk will also increase in a number of developed countries, including in the EU, New Zealand and the United States. The continuing effects of drought may reduce output in some parts of Africa.

Economic growth and a desire for a more diversified diet in many developing countries are expected to sustain import demand in 2011 to 49.5 million tonnes of milk equivalent, an increase of 5.4 percent. Increased trade is anticipated for all major dairy products, although growth in butter will be muted, as some processors switch to more remunerative products. Overall, most of the main trading countries are likely to record an increase in sales, especially Argentina, Belarus, the EU, New Zealand and the United States.

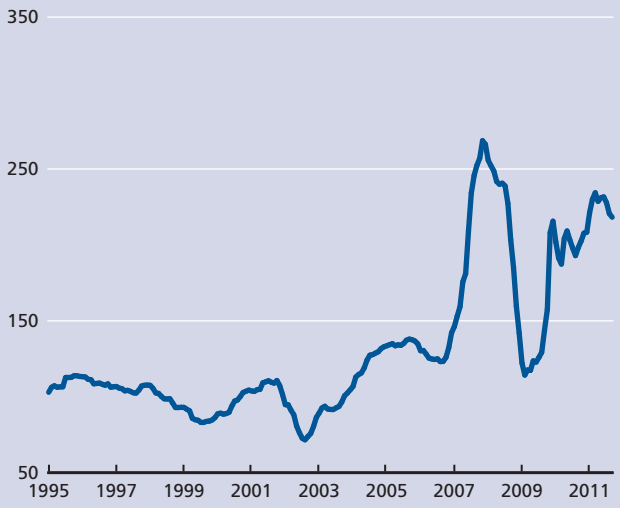
An extended period of favourable international prices has meant that publically financed inventories of dairy commodities have been drawn down and are now at minimal levels in the EU and the United States. Consequently, international dairy quotations for the coming year will remain particularly sensitive to climatic conditions in relation to pasture growth, the availability and price of fodder and feed, and their effect on milk production.

World dairy market at a glance

	2009	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes, milk equiv.			%
WORLD BALANCE				
Total milk production	**701.4**	**713.6**	**727.6**	**2.0**
Total trade	**44.3**	**47.0**	**49.5**	**5.4**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	101.7	102.3	103.1	0.8
Developed (kg/year)	233.9	233.4	233.7	0.1
Developing (kg/year)	66.7	68.0	69.4	2.1
Trade share of prod. (%)	6.3	6.6	6.8	3.4

FAO DAIRY PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	142	200	227	14.0

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.

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Fish and fishery products market summary

Strong continued growth in aquaculture production and a rebound in capture fisheries after the decline in 2010 caused by El Niño moved total fish supply for 2011 to an estimated 152 million tonnes, the highest level ever. Although some of the increases from capture fisheries will go to fishmeal and oil production, 2011 can still expect a 1.3 percent increase in per capita consumption of fish for direct human consumption.

Trade has also been brisk, in particular in the first half of the year, but with some weakening of prices for a number of species during the second half. Total import and export values for 2011 are bound to set a new record despite the current softening, with growing volumes pushing total exports to almost USD 120 billion, an 11 percent increase over 2010.

The FAO Fish Price Index reached its highest level ever in March 2011, after which price levels declined for some fisheries commodities. As usual, the picture is not uniform, with supply constraints for some species such as tuna, shrimp, tilapia, herring and mackerel pushing prices upward. At the same time, prices have declined for farmed Atlantic salmon due to supply increases.

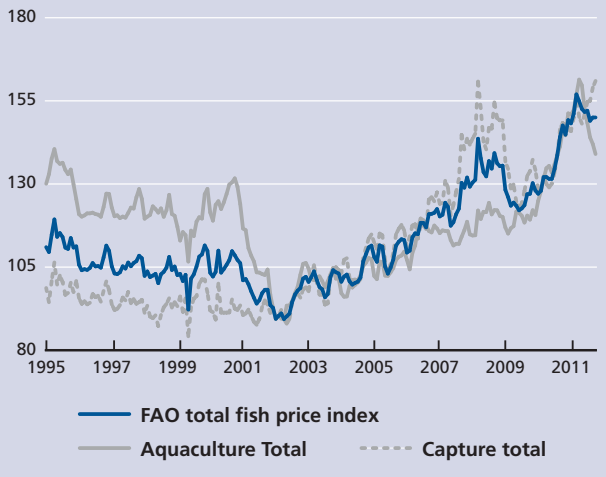
World fish market at a glance

	2009	2010 *estim.*	2011 *f'cast*	Change: 2011 over 2010
	million tonnes			*%*
WORLD BALANCE				
Production	**144.8**	**146.9**	**151.7**	**3.2**
Capture fisheries	89.1	87.7	90.1	2.7
Aquaculture	55.7	59.2	61.6	4.0
Trade value (exports USD billion)	**95.7**	**107.5**	**119.7**	**11.3**
Trade volume (live weight)	**54.9**	**55.2**	**56.0**	**1.4**
Total utilization	**144.8**	**146.9**	**151.7**	**3.2**
Food	118.0	121.1	124.0	2.5
Feed	20.0	17.7	20.3	14.4
Other uses	6.8	8.1	7.3	-9.3
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/year)	17.3	17.6	17.8	1.3
From capture fisheries (kg/year)	9.1	9.0	9.0	-0.2
From aquaculture (kg/year)	8.2	8.6	8.8	2.8

FAO FISH PRICE INDEX[1] (2002-2004=100)	2009	2010	2011 *Jan-Oct*	Change: Jan-Oct 2011 over Jan-Oct 2010 *%*
	126	137	152	16.4

[1] Data source: Norwegian Seafood Export Council

FAO fish price index (2002-2004 = 100)



Data source: Norwegian Seafood Export Council

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Market assessments

WHEAT

PRICES

Lower prices amid higher production

Larger than anticipated world production and a strengthening US Dollar contributed to the decline in international wheat prices in recent weeks. A recovery in the CIS countries and bigger crops than expected in northern Europe helped improve the supply outlook and put more downward pressure on prices. While at the beginning of the 2011/12 marketing season in June, the benchmark **United States No.2 Hard Red Winter, f.o.b.** was as much as 80 percent higher than in the corresponding period last year, it averaged USD 302 per tonne in October 2011, up marginally from October 2010. Wheat export prices have fallen sharply from USD 364 per tonne in April and their peak of USD 482 per tonne in March 2008.

However, in spite of a declining price trend, wheat markets remain volatile. International wheat prices continued to move in tandem with swings in maize markets. The much tighter maize balance has been the main driver of price changes in wheat markets since the beginning of the current season, mostly because of the increased use of wheat for animal feed. Furthermore, the fact that maize continues to trade close, if not at a premium, to wheat at the Chicago Board of Trade (CBOT) has become one of the emerging features of the current season.

In October, the **CBOT wheat for March 2012 delivery** averaged USD 243 per tonne, 9 percent below the corresponding period last year. Larger than expected inventories and generally favourable planting conditions for harvests in 2012 are expected to moderate any upside pressures on wheat prices that might arise. However, amidst the backdrop of much tighter maize markets and macroeconomic uncertainties, wheat prices are likely to remain firm through the remainder of the 2011/12 season.

PRODUCTION

Global wheat output set to reach a new high in 2011

FAO's latest forecast for global wheat production in 2011 stands at 691 million tonnes, 6 percent above last year's level and some 6 million tonnes above the previous high, which was set in 2009. Even with some important southern hemisphere crops still to be gathered, the forecast for the 2011 world wheat crop is now quite firm and indicates a much larger harvest than expected at the start of the season. Although, as the season progressed, crop prospects deteriorated in some major producing countries such as the United States and some EU countries, the predicted sharp recovery in production in the CIS countries from the drought-reduced level of 2010 has turned out even larger than expected, more than offsetting the downward revisions elsewhere.

In the **EU**, the aggregate wheat output is now estimated just over 1 percent up from 2010 at 138.6 million tonnes. Early season hopes for a larger crop were dashed when drought struck major producing areas from the United

Figure 1. Wheat export price (US no. 2 H.W. Gulf)

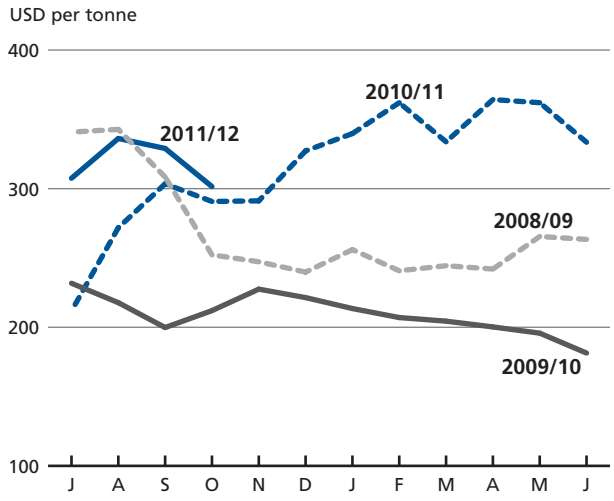
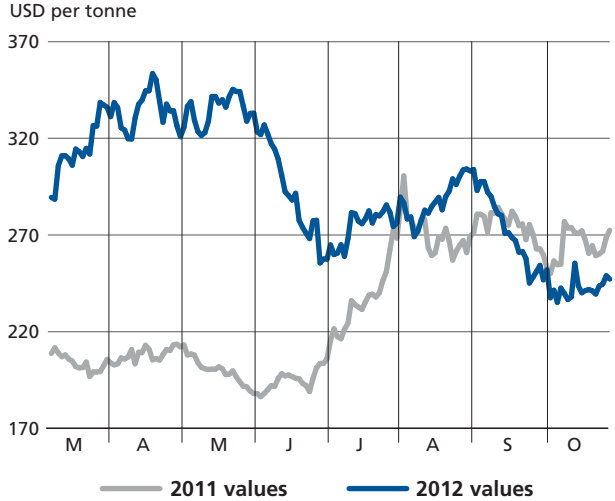


Figure 2. CBOT wheat futures for March



Kingdom through France and Germany and into Poland. However, particularly favourable conditions led to unexpectedly good outputs in some eastern EU countries, particularly Hungary and Romania, that partially offset the drought-reductions elsewhere. In the rest of Europe, production in the CIS countries has exceeded earlier expectations, recovering sharply from the drought-reduced level of 2010 in the **Russian Federation** and **Ukraine**.

In *North America*, the **United States** recently completed its delayed spring 2011 wheat harvest, which was down by some 9 percent compared with 2010. In **Canada**, good summer weather improved the outlook for 2011 grain crops after an uncertain start of the season because of a late damp spring. Latest official forecasts now put the 2011 wheat harvest at just over 24 million tonnes, nearly 4.3 percent above last year's level.

In *Asia*, after concern about exceptionally dry conditions in some parts of **China** early in the season, the 2011 wheat harvest in the country has set a new record, up 1.4 percent from the previous record, which was set last year. Production in **India** and **Pakistan** has also risen to new highs. In the CIS group in Asia, production in **Kazakhstan** has recovered sharply from last year's drought-reduced harvest.

Elsewhere in the northern hemisphere, aggregate output in *North Africa* rebounded significantly from last year's drought-reduced level following upturns in the main producing countries. In the *Near East*, Turkey has harvested another bumper crop but, in most other countries, outputs were below average, reflecting late and erratic rainfall.

In the southern hemisphere, the bulk of the 2011 wheat crops are to be harvested between now and the end of the year. In *South America*, prospects in **Argentina** have deteriorated somewhat in recent weeks due to adversely dry conditions. Yields are expected to be well down from last year's records and given a similar area planted, the country's wheat crop is forecast to drop by almost 12 percent. In *Oceania*, prospects for the wheat crop in some eastern parts of **Australia** worsened during the latter part of the season, but conditions in Western Australia still favour a sharp recovery after last year's drought in that region. The country's aggregate wheat output is forecast to remain close to the overall good 2010 level.

Wheat planting for 2012

In many parts of the northern hemisphere, the winter wheat crops for harvest in 2012 are already being planted, or are due to be sown in the next few weeks. Planting conditions are reported as generally favourable in most of the concerned areas, with the exception of the **United**

Table 1. World wheat market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**684.7**	**651.8**	**691.0**	**6.0**
Trade[1]	**130.1**	**125.5**	**131.0**	4.4
Total utilization	**657.2**	**667.4**	**681.9**	**2.2**
Food	463.5	468.8	473.6	1.0
Feed	120.3	124.0	130.9	5.6
Other uses	73.4	74.5	77.4	3.9
Ending stocks	**198.8**	**181.9**	**189.7**	**4.3**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	67.9	67.8	67.7	-0.1
LIFDC (kg/year)	54.2	54.1	54.4	0.6
World stock-to-use ratio (%)	**29.8**	**26.7**	**28.2**	
Major exporters stock-to-disappearance ratio[2] **(%)**	**21.4**	**17.6**	**19.0**	

FAO WHEAT PRICE INDEX[3] (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010
				%
	154	169	228	43.9

[1] Trade refers to exports based on a common July/June marketing season.

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

[3] Derived from International Grains Council (IGC) wheat index.

Table 2. Wheat production: leading producers[1]

	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes		%
European Union	136.9	138.6	1.2
China (Mainland)	115.2	116.8	1.4
India	80.8	84.3	4.3
United States	60.1	54.7	-9.1
Russian Federation	41.5	57.0	37.3
Australia	26.3	26.2	-0.4
Canada	23.2	24.2	4.3
Pakistan	23.3	24.2	3.9
Turkey	19.7	21.8	10.7
Ukraine	17.0	22.5	32.4
Kazakhstan	9.6	22.2	131.3
Iran Islamic Rep. of	13.5	13.5	0.0
Argentina	14.7	13.0	-11.6
Egypt	7.2	8.4	16.7
Uzbekistan	6.7	6.3	-6.0
Other countries	56.1	57.4	2.2
World	**651.8**	**691.0**	6.0

[1] Countries listed according to their position in global production (average 2009-2011).

States, where prolonged dryness in southern parts is hampering fieldwork, and **Ukraine**, where conditions are also adversely dry. With current wheat prices similar to their levels a year ago and utilization expected to outstrip supply in 2011/12, the crop should remain an attractive option for producers. As a result, farmers are expected to maintain, or even increase, the area under wheat. In the United States, early indications point to a considerable increase in wheat plantings for harvest in 2012, contrasting with the relatively small coverage in the past two years.

In *Europe*, plantings may also increase in the CIS countries, where farmers will be keen to continue benefiting from attractive prices and strong demand in the region after the huge production shortfall in 2010. In the **EU**, however, with other crops competing strongly for land, the wheat area is expected to remain relatively unchanged. In Asia, planting of winter wheat for harvest in 2012 is already underway or due to start in October in the main producing countries. Prospects in **India** are favourable but **p**ersistent dryness in parts of **China** and severe floods in the Sindh province of **Pakistan** could impact sowing in the affected regions.

TRADE

World wheat trade to rebound in 2011/12

World wheat trade (exports, including wheat flour in wheat equivalent) in 2011/12 (July/June) is forecast to reach 131 million tonnes, 4.4 percent higher than estimated for 2010/11 and 6 million tonnes more than FAO's first trade forecast for 2011/12, published in the June 2011 *Food Outlook*.

The bulk of the trade expansion in 2011/12 over the previous season is expected to be supported by strong import demand in Europe, primarily in the **EU**. The EU's total wheat imports are forecast to increase by nearly 3 million tonnes in 2011/12, given this year's small increase in wheat production in the EU but large supplies in the Black Sea region.

In *Asia*, the biggest wheat importing region, total wheat imports in 2011/12 are forecast to approach 60 million tonnes, up nearly 2 million tonnes from 2010/11. The biggest increases are forecast for **Afghanistan**, **Iraq**, **Israel**, **Saudi Arabia**, **Syrian Arab Republic** and **Yemen**, mostly to compensate for lower domestic outputs, and in **China** and **Indonesia** because of a continuing strong growth in domestic demand. However, smaller wheat purchases are forecast for **Bangladesh** and **Turkey,** largely because of higher domestic crops, and for **Viet Nam,** because of relatively large carryover inventories.

Total wheat imports by *Africa* are forecast to exceed 37 million tonnes, down 500 000 tonnes from 2010/11. The decrease will be mostly due to lower imports by several countries in North Africa, notably **Egypt**, **Morocco** and **Tunisia,** following bigger harvests, more than offsetting larger shipments to several countries in sub-Saharan Africa, particularly **Ethiopia,** because of lower production and rising domestic prices.

In *Latin America and the Caribbean*, total wheat imports in 2011/12 are forecast to remain unchanged from the previous season, at around 20.4 million tonnes. Imports by **Brazil**, the region's largest wheat importer, are forecast to increase slightly, to compensate for a decline in production.

Regarding **exports**, a sharp recovery in availabilities in the CIS countries is the main feature of the 2011/12

Figure 3. Wheat imports by region

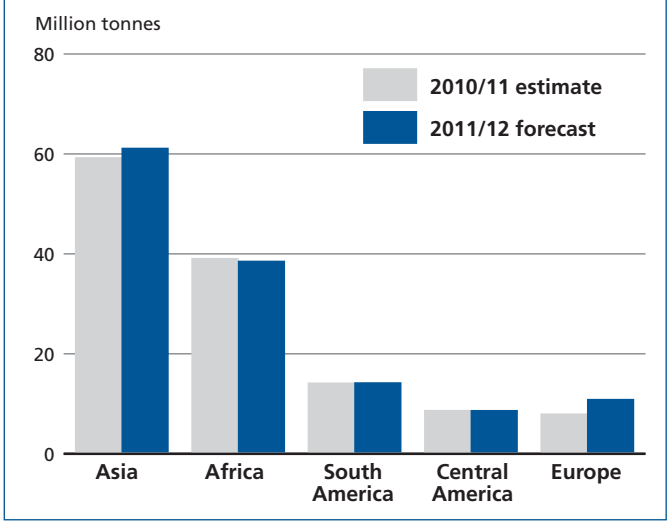
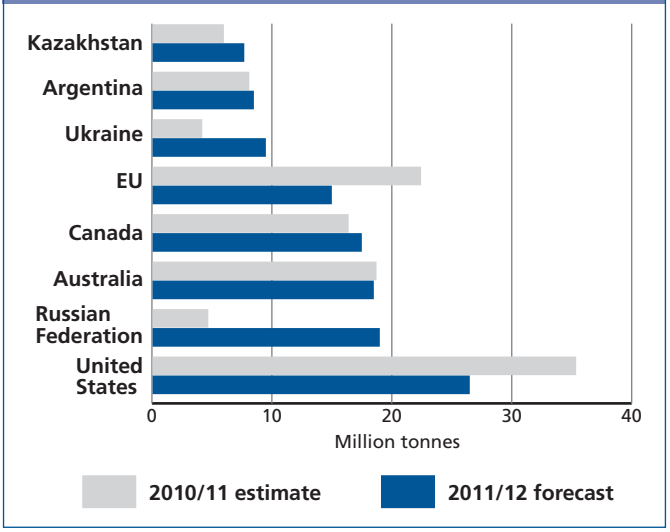


Figure 4. Wheat exporters



marketing season. In fact, the prospect for exports from the Black Sea region improved steadily as the season progressed and harvests completed, confirming a strong recovery from last year's drought-reduced levels. In the **Russian Federation**, a strong upturn in production (up 37 percent from last year) and the removal of export restrictions since the start of the season are expected to boost wheat shipments to at least 18.5 million tonnes, close to the record in 2008/09 after the previous season's reduced level. The Government has recently announced that, if total grain exports approach 24 million tonnes, it may impose export taxes. Wheat shipments from **Ukraine** are forecast to triple, to 9 million tonnes, and a 30 percent growth in exports is expected by **Kazakhstan,** to 7.2 million tonnes. As a result, the aggregate wheat sales of the three major CIS wheat producers may reach 33 million tonnes, well above the world's largest exporter, the United States. Wheat exports from the **United States** are forecast to decline this season to 26 million tonnes from 35 million tonnes in 2010/11, due to a cut in domestic production and stronger currency, which reduces its price competitiveness against other export origins. A significant reduction in shipments is also expected in the **EU**, where a relatively tight domestic supply compared with last year is expected to curb sales by almost one-third to just under 15 million tonnes. However, shipments from the other traditional major exporting countries, namely **Argentina**, **Australia** and **Canada**, are forecast to remain close to the previous season's levels or even rise slightly.

UTILIZATION

Higher feed use boosts world wheat utilization in 2011/12

Contrary to the forecast at the start of the season , for a slight expansion in total wheat utilization in 2011/12, the latest indications point to a significant increase, mostly in response to larger availabilities than anticipated earlier and competitive feed wheat relative to maize. At the current forecast level of 682 million tonnes, total wheat utilization would be 2.2 percent higher than in 2010/11. The 2.2 percent expansion exceeds the ten-year trend as well as the 1.5 percent and 1.8 percent increases in 2010/11 and 2009/10 respectively but lower than the 2.9 percent expansion in 2008/09.

World utilization of wheat for **direct human consumption** is forecast at 474 million tonnes, up 1 percent from 2010/11. This implies a 68 kg annual consumption per person, which is similar to the levels of the past two seasons, thus indicating that the global food use of wheat is continuing to keep up with average world population growth. Among the most populous countries, per capita wheat consumption in China[1] is likely to continue a slow decline, at just under 64 kg, compared with 73 kg at the start of the millennium. The gradual fall in per capita wheat consumption in China is mainly due to larger intake of more value-added food products. However, in India, per capita

[1] All references to China from here onwards refer to Mainland China unless otherwise specified.

Figure 5. EU wheat production, utilization and stocks

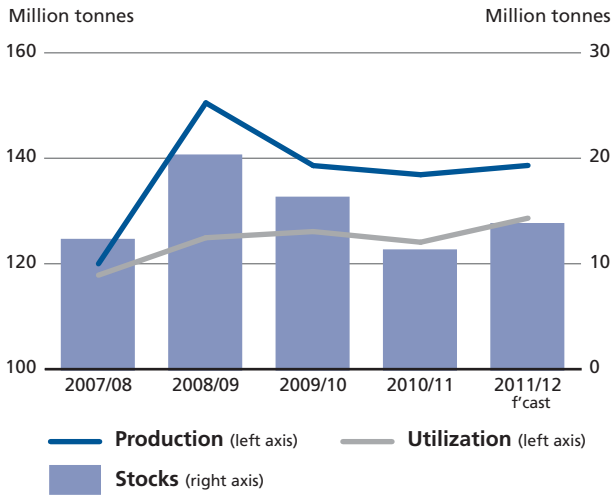
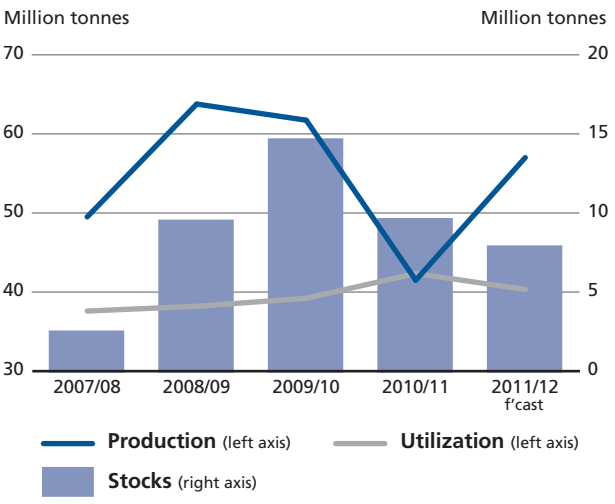


Figure 6. Russia wheat production, utilization and stocks



consumption of wheat has been rising over the past decade and is now over 61 kg. While unexpected drops in year-on-year consumption may be rare, they can happen as a result of conflicts, unexpected production and/or economic problems. In 2011/12, the largest consumption declines among major wheat consuming countries are anticipated in Libya with a fall of 4 kg, and in Bahrain and Oman, which will have declines of 2–3 kg.

The latest forecast for total **feed utilization** of wheat stands at 131 million tonnes, 5.6 percent higher than the revised 2010/11 estimate and up 4 million tonnes from FAO's first forecast in June. As a share of total cereal utilization, feed usage of wheat remains relatively limited and concentrated in few countries or regions with the EU being the largest market for feed wheat. However, in recent years, the usage of wheat for animal feed has been increasing due to its price competiveness compared with coarse grains. In 2011/12, the strong recovery in wheat production in the CIS and larger global supplies of feed wheat, in the face of very tight maize availability, are among the main factors for the surge in wheat usage for animal feed. The fastest expansions are expected in China, the EU and the United States.

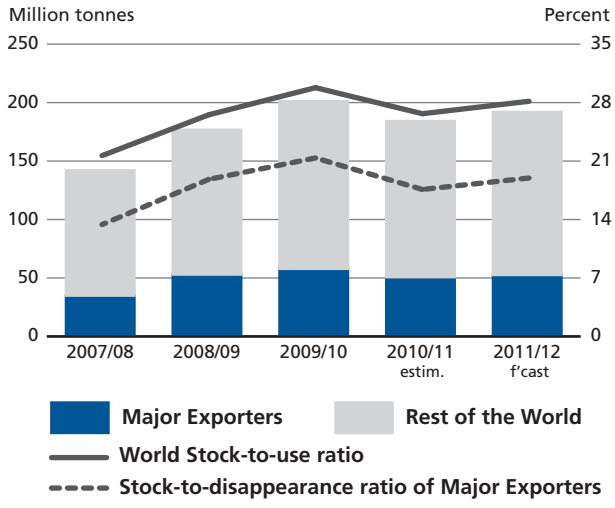
The **other uses** of wheat include industrial use and seeds. The combination of other uses and post harvest losses account for 11 percent of world wheat production in 2011/12. The industrial use of wheat has expanded over the past decade, mostly driven by larger utilization of wheat as feedstock for biofuels (ethanol). According to the International Grains Council (IGC), total wheat used for industrial production in 2011/12 could reach 21 million tonnes, 1 million tonnes higher than in 2010/11. Starch manufacturing constitutes the primary industrial use of wheat followed by biofuels. The IGC forecasts that wheat used for production of biofuels (excluding non-fuel uses) will reach 7.3 million tonnes in 2011/12, 22 percent higher than in 2010/11 mostly is concentrated in the EU (5.3 million tonnes), followed by Canada (2.1 million tonnes) and China (1 million tonnes).

STOCKS

Wheat inventories to increase in 2011/12

FAO's forecasts for ending stocks in 2012 have been revised up steadily since the beginning of the season. The main reason is bigger harvests than earlier anticipated in many countries. The latest forecast for global stocks takes into account recent adjustments to the size of wheat inventories in the CIS, China, the EU and the United States. Based on the latest production estimates for 2011 and the utilization forecasts for 2011/12, world wheat stocks are likely to approach 190 million tonnes by the close of the crop seasons in 2012, 10 million tonnes, or 4.3 percent, above their opening levels. This forecast is 4 million tonnes higher than was reported in the October issue of FAO's *Crop Prospect and Food Situation*. The latest upward adjustments reflect expectation of larger ending stocks in several countries; namely **Australia**, **Canada**, the **Russian Federation**, and the **United States**, more than offsetting downward revisions to the previous forecasts for **China** and the **EU**.

Figure 7. Wheat stocks and ratios



Based on the current supply and demand estimates, the **global stocks-to-use ratio** for 2011/12 is expected to reach 28.2 percent, up sharply from 26.7 percent in 2010/11. It would be well above the low of 21.6 percent registered in 2007/08 as well as its five-year average (2004/05–2008/09) of 26.2 percent. Total wheat stocks held by the five traditional exporters (Argentina, Australia, Canada, the EU and the United States) are forecast to increase slightly from their opening levels, to nearly 50 million tonnes. At the current forecast, the ratio of stocks held by the major exporters to their disappearance (i.e. domestic utilization plus exports) is put at 19 percent, up slightly from 17.6 percent in 2010/11 but well above the low of 13.4 percent in 2007/08.

Among the other large stockholders, wheat inventories in **China** are forecast to remain stable at around 50 million tonnes. Also in **India**, where this year's wheat production is also at a record, ending stocks are anticipated unchanged, at around 18 million tonnes.

COARSE GRAINS

PRICES

Prices declined in spite of low stocks

International prices of major coarse grains have come under downward pressure in recent months mainly because of weaker than anticipated demand, driven by unfavourable macroeconomic conditions. The decrease in prices came despite low stocks, with 2011 production not increasing sufficiently to bring about any significant recovery in world inventories from their current low levels.

In October 2011, the benchmark **United States maize prices (yellow, No. 2, f.o.b.)** averaged USD 275 per tonne, down 8 percent from the previous month. For most of 2011, however, maize was traded at values well over 50 percent above those of the previous year. In June, the gap widened to double last year's level but by October, maize prices had fallen to only 15 percent above October 2010. Among other major coarse grains, **sorghum** prices have followed a similar trend and, by October, they stood at roughly 15 percent above last year's levels. **Barley (feed)** prices in October were also hovering close to 2010 levels. Barley markets have remained more subdued this season, benefiting from a production recovery in the Russian Federation and large global supplies of feed wheat.

The outlook for supply and demand in 2011/12 has been exceptionally uncertain since the beginning of the season. The tight maize situation in the United States, the world's largest producer, consumer and exporter of maize, has proven to be one of the foremost determining factor of price changes. Between May and September, the planted area and/or yields of maize in the United States were subject to several unexpectedly large monthly revisions to production forecasts. The US Department of Agriculture (USDA) Quarterly Stocks Report, released on September 30, pointed to much larger ending stocks for the 2010/11 season than previously anticipated. This resulted in a sharp fall in maize futures on 30 September, with the December maize futures contract in CBOT falling by its maximum daily limit, to USD 233 per tonne, down 6.3 percent from the previous trading day closing. Nonetheless, prices have recovered some of their earlier losses and, as of 26 October, CBOT maize futures for March 2012 delivery were up again to USD 252 per tonne. The prospect of continuous tightness in maize markets kept maize above wheat quotations for several months since the beginning of 2011, making wheat more price competitive than maize. By late October, **CBOT maize futures for March 2012 delivery** were quoted at around USD 261 per tonne, 4 percent or USD 11 per tonne higher than wheat futures for March delivery. As mentioned, maize futures plunged on 30 September, although they subsequently recovered, largely sustained by continuing strong import demand in Asia and the recent weakening of the US Dollar. Although, under the current macroeconomic climate, it is difficult to predict how prices will behave in coming months, the tight maize supply is likely to keep prices firm, lending support to other markets, especially, to wheat.

PRODUCTION

Coarse grains output increases in 2011

FAO's latest forecast for 2011 world production of **coarse grains** stands at 1 152 million tonnes, which would be

Figure 8. Maize export price (US no. 2 yellow, Gulf)

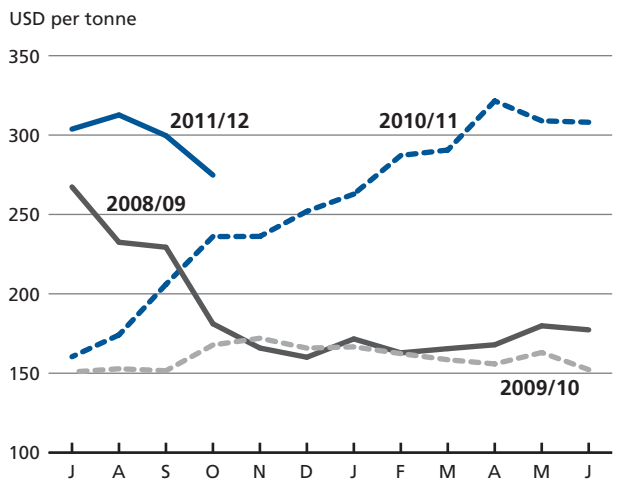


Figure 9. CBOT maize futures for March

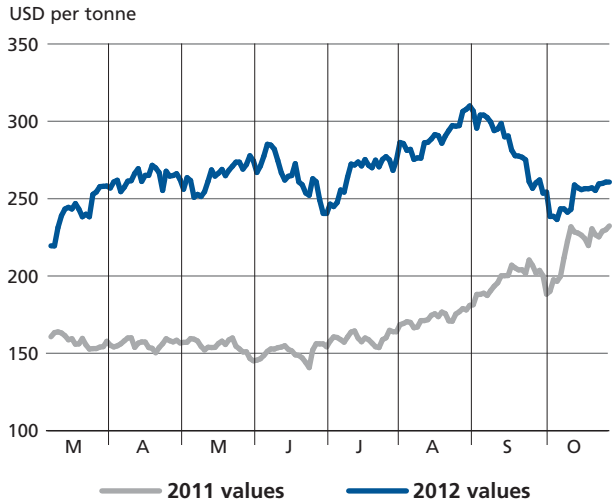


Table 3. World coarse grain market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**1 122.8**	**1 122.9**	**1 151.8**	**2.6**
Trade[1]	**115.8**	**122.6**	**120.0**	-2.1
Total utilization	**1 126.9**	**1 144.5**	**1 154.7**	**0.9**
Food	192.1	199.4	200.8	0.7
Feed	634.7	630.6	636.6	1.0
Other uses	300.0	314.5	317.4	0.9
Ending stocks	**194.7**	**170.1**	**168.0**	**-1.2**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	28.2	28.8	28.7	-0.3
LIFDC (kg/year)	37.0	38.2	38.1	-0.3
World stock-to-use ratio (%)	**17.0**	**14.7**	**13.9**	
Major exporters stock-to-disappearance ratio[2] **(%)**	**14.9**	**10.5**	**8.6**	

FAO COARSE GRAIN PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	157	176	281	71.2

[1] Trade refers to exports based on a common July/June marketing season.

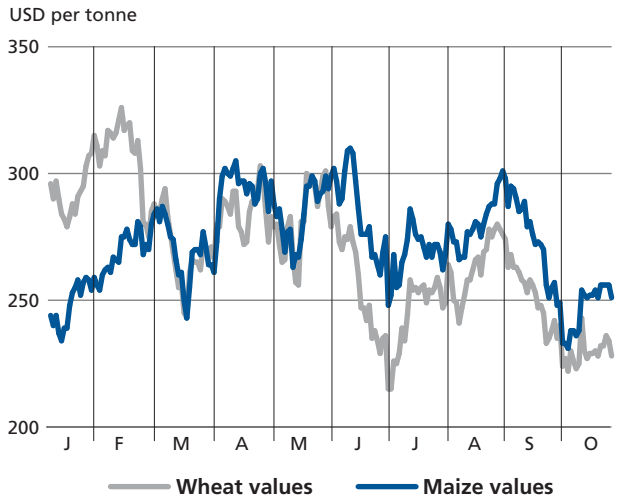
[2] Major exporters include Argentina, Australia, Canada, EU and the United States.

Table 4. Coarse grain production: leading producers[1]

	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes		%
United States	330.6	326.6	-1.2
China (Mainland)	186.5	193.9	4.0
European Union	140.7	147.3	4.7
Brazil	58.3	58.9	1.0
India	40.1	41.4	3.2
Mexico	31.1	28.5	-8.4
Russian Federation	17.5	31.7	81.1
Argentina	30.0	31.0	3.3
Ukraine	21.3	28.3	32.9
Canada	22.4	21.4	-4.5
Nigeria	22.3	22.1	-0.9
Indonesia	18.4	17.9	-2.7
Ethiopia	14.2	12.6	-11.3
Australia	13.5	12.8	-5.2
South Africa	13.9	11.7	-15.8
Other countries	162.1	165.7	2.2
World	**1 122.9**	**1 151.8**	2.6

[1] Countries listed according to their position in global production (average 2009-2011).

Figure 10. CBOT wheat and maize nearby futures



2.6 percent up from the previous year's crop. Early season forecasts had pointed to a larger increase, but adverse dry conditions affected major maize growing areas in the United States, the world's largest producer, causing the prospects for the global crop to be revised downward sharply as the season progressed, despite better than expected crops in some other countries.

Regarding **maize**, the major coarse grain grown worldwide, world production in 2011 is now forecast at 864 million tonnes, 2.2 percent up from 2010. Production in the **United States**, which alone accounts for about 40 percent of global maize output, was forecast at 316 million tonnes in the October USDA Crop Report, virtually unchanged from last year's level, despite an estimated 4 percent increase in the planting area. Drought conditions during the season took their toll on the crop, rendering many hectares not worth harvesting for grain and reducing yield potential. In *Asia*, **China**, the world's second largest maize producer, again raised its production to a new record level. Elsewhere, another relatively large crop was gathered earlier in the year in South America. Planting of the **2012 maize crop** is already underway in the sourthern hemisphere, with farmers in **Argentina** and **Brazil** expected to expand sharply the area coverage in response to strong demand and attractive price prospects. Maize planting is also starting in southern Africa, with positive prospects after a reduced crop in 2011.

FAO's latest forecast for world 2011 **barley** production stands at about 135 million tonnes, up 8 percent from the 2010 level. Most of the increase is to be realized in Europe, the world's largest barley producing area, where a slightly smaller crop in the **EU** has been more than offset by a sharp

Figure 11. Maize production

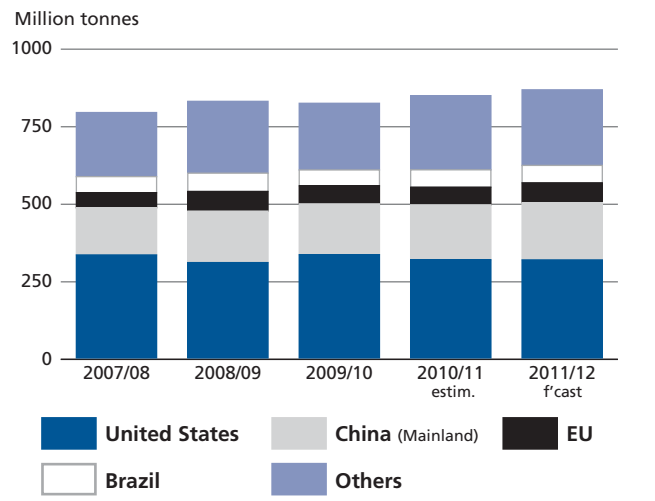
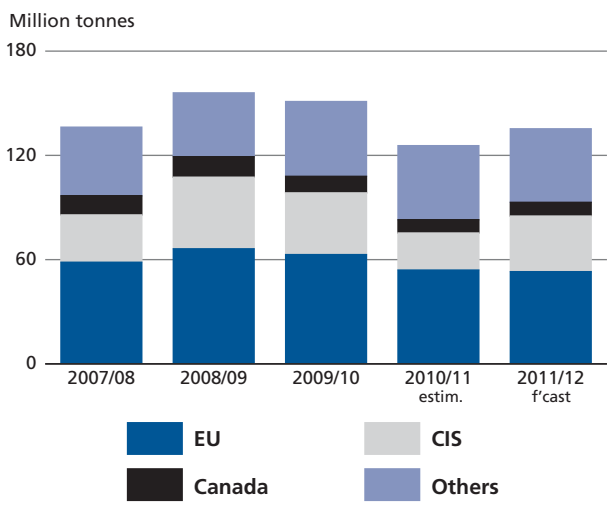


Figure 12. Barley production



recovery from last year's drought-reduced level in the Russian Federation. The forecast of world **sorghum** output in 2011 is put at about 60 million tonnes, almost 5 percent down from 2010. Production in some of Africa's main producing countries has been compromised by drought, particularly in Eastern Africa. Likewise, the sorghum crop in the United States was affected by adversely dry conditions this year.

TRADE

World trade in coarse grains to remain steady in 2011/12

Global trade (exports) in coarse grains in 2011/12 (July/June), is forecast nearly unchanged from 2010/11, at 120 million tonnes. This is well under the record 131 million tonnes registered in 2007/08, but still the second highest trade volume on record. Among the major coarse grains, world trade in **maize** is expected to reach 94 million tonnes, also unchanged from 2010/11 and the second highest volume after the record 102 million tonnes in 2007/08. World trade in **barley** and **sorghum** could decline slightly, to 16 million tonnes and 6.5 million tonnes, respectively, while small increases are foreseen for trade in **oats** (2 million tonnes), **rye** (400 000 tonnes) and **millet** (440 000 tonnes).

Although in aggregate terms, the volume of world trade is not expected to be much different from the previous season, considerable changes are expected regarding both imports and exports on a country-by-country basis. In *Asia*, total imports are forecast at 66 million tonnes in 2011/12, some 2 percent higher than estimated for 2010/11. The largest expansion is forecast for **China**. where total coarse grain imports are put at 6.8 million tonnes, up 90 percent from the previous season. In spite of its record maizecrop, the country's maize imports are forecast to reach 4.5 million tonnes, 3.2 million tonnes more than in 2010/11. This increase is largely driven by China's growing demand for feed and the persisting elevated domestic maize prices. Coarse grain imports by the world's largest importer, **Japan,** are seen to increase marginally, to 19.2 million tonnes, after a decline in 2010/11 following the March earthquake and nuclear disaster. The world's largest importer of barley, **Saudi Arabia**, is forecast to raise its barley purchases by at least 500 000 tonnes, to 6.7 million tonnes, taking advantage of this year's larger barley supplies in the Russian Federation and Ukraine. By contrast, in the **Republic of Korea**, a leading market for maize, this year's maize imports are likely to be smaller due to weakening overall feed demand and larger imports of feed wheat.

In *Africa*, total imports of coarse grain are forecast at 16.8 million tonnes in 2011/12, up 800 000 tonnes from 2010/11. Aggregate imports by countries in northern Africa are forecast to decline slightly, to 12.5 million tonnes. Larger maize purchases by **Egypt** are expected to be mostly offset by declines in barley imports by **Tunisia** and, to a lesser extent, lower coarse grain imports by **Algeria** and **Morocco**, following increased domestic production. However, imports into sub-Saharan Africa are forecast to soar by 900 000 tonnes. The bulk of the increase is expected in Kenya and the Sudan. In **Kenya**, where maize is used mostly for food, imports could nearly triple from the previous season and reach 1.1 million tonnes in 2011/12 to counter the elevated domestic prices. In **the Sudan**, imports of sorghum are forecast to nearly double from the

Figure 13. Coarse grain imports by region

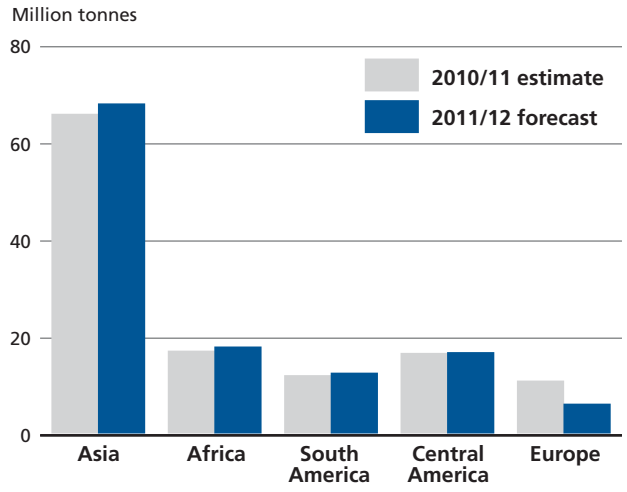
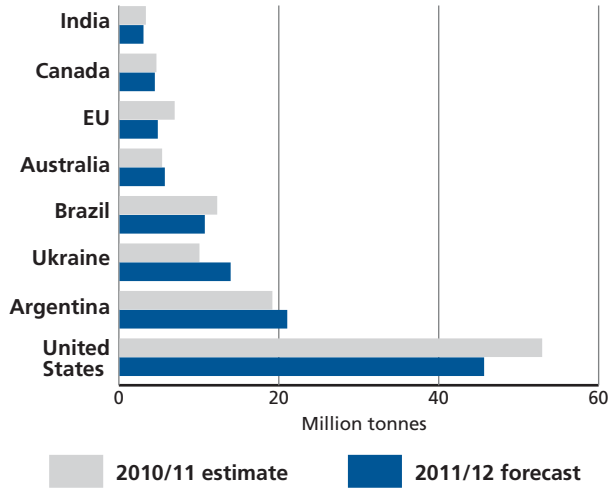


Figure 14. Coarse grain exporters



previous season, to 400 000 tonnes, because of a fall in domestic production.

Total imports by countries in *Latin America and the Caribbean* are forecast to increase by 1 million tonnes from the previous season to 27.4 million tonnes. **Mexico**, the region's largest coarse grain importer, is expected to take 11 million tonnes, some 950 000 tonnes more than the previous season, with maize accounting for most of the anticipated increase. Slightly higher imports are forecast for several countries in South America, most notably by **Venezuela,** due to lower production and strong feed demand.

Regarding **exports**, an emerging feature in 2011/12 is the anticipated sharp reduction of at least 7 million tonnes in coarse grain (mostly maize) shipments from the **United States** to 45 million tonnes (July/June), due to the very tight domestic balance. Exports by the **EU** are also in decline, falling by almost 2 million tonnes (mostly barley) to 4.1 million tonnes. **Brazil** is also likely to export some 1.5 million tonnes less, after a record 11.5 million tonnes in sales (all maize) in 2010/11. Smaller maize exports are also forecast for **Canada,** down 500 000 tonnes from the previous season, while in **South Africa,** maize shipments may decline by 200 000 tonnes. Partly offsetting these declines, **Argentina** is forecast to increase its maize and barely exports by 2 million tonnes, to 20.3 million tonnes. In **Ukraine**, following this year's strong recovery in maize production, total maize exports are seen to increase by 3.7 million tonnes, to 9.5 million tonnes. Similarly, in the **Russian Federation**, a recovery in this year's barley production is expected to result in a five-fold increase in its exports, to 1.6 million tonnes.

UTILIZATION

Growth in utilization to slow down in 2011/12

Total utilization of coarse grains in 2011/12 is currently forecast to increase by a mere 0.9 percent from 2010/11, to 1 155 million tonnes. This compares with 1.5 percent growth in 2010/11 and 2 percent in 2009/10. At the current forecast level, total utilization is 10 million tonnes less than anticipated at the start of the season. The downward adjustment reflects weaker than anticipated growth in feed demand as well as the stagnant demand for biofuels.

World **food** consumption of coarse grains is forecast to increase by 0.7 percent in 2011/12, to 200 million tonnes. Globally, food use of coarse grain accounts for about

Figure 15. Coarse grain utilization

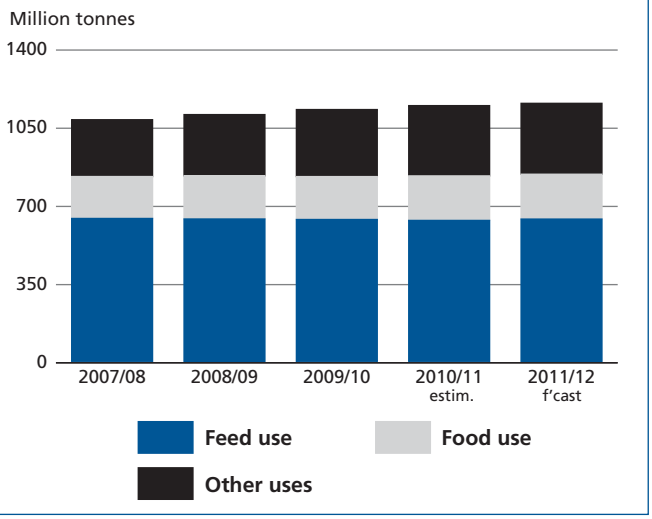


Table 5. Maize use for ethanol (excluding non-fuel) in the United States

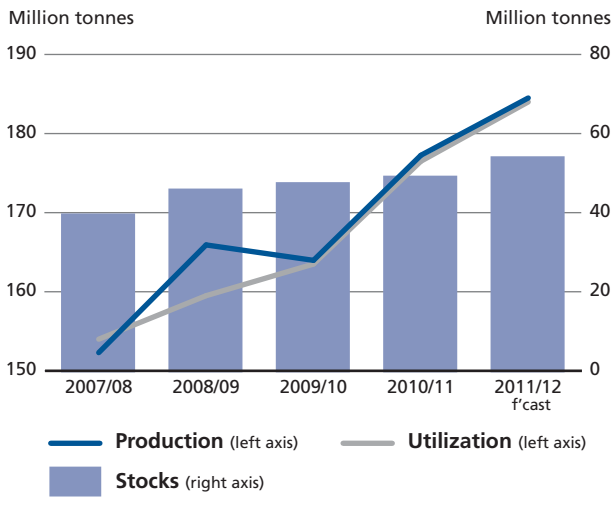
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11 *estim.*	2011/12* (*f'cast*)
				Thousand tonnes				
Maize production	299 986	282 263	267 503	331 177	307 142	332 550	316 166	315 811
Ethanol use	33 611	40 726	53 837	77 453	93 396	116 616	127 513	127 005
Yearly change (%)	13	21	32	44	21	25	9	-0.4
As production (%)	11	14	20	23	30	35	40	40

Source: WASDE-USDA. *October 2011 USDA's initial assessment of US and world crop supply and demand prospects.

17.5 percent of the total use, which is relatively small. However, its use for human consumption is significant, mostly in Africa and in Latin America and the Caribbean. For developing countries as a whole, food use of coarse grains is forecast to increase by over 1 percent, to around 169 million tonnes. In the developed countries, where food use of coarse grains is much smaller, it is expected to reach 32 million tonnes, slightly short of the previous season's level.

World **feed** utilization of coarse grains in 2011/12 is expected to reach 637 million tonnes, up 1 percent from 2010/11. The increase is relatively small for several reasons, including tight supply and high prices of coarse grains against more abundant supply and cheaper feed wheat, large availabilities of distilled dried grains (DDGs), an alternative feed, and slow economic growth prospects. In fact, rather than expanding, feed demand is expected to contract in the United States (-3.7 percent), the EU (-2.6 percent), and Canada (-1.4 percent). These declines are considered to offset strong expansions elsewhere, in particular in the CIS (+11 percent) and China (+4.8 percent). Overall, total feed utilization of coarse grains in the developed countries is forecast around 323 million tonnes, 0.5 percent less than in the previous season. By contrast, aggregate feed use of coarse grains in developing countries is expected to grow by 2.5 percent from 2010/11 to 313 million tonnes.

Figure 16. China maize production, utilization and stocks



Industrial usage constitutes the largest share of the "other use" category of coarse grains. According to estimates from the IGC it could reach 282 million tonnes in 2011/12, up 1.3 percent from the estimated volume in 2010/11. The three largest industrial applications of coarse grains are ethanol, starch and brewing. The use of maize for production of ethanol in the United States has been a major driver for the rapid expansion of industrial use of coarse grains in recent years. However, USDA (October 2011) forecasts total use of maize destined for ethanol (biofuels) in the United States to reach 127 million tonnes in 2011/12, pointing to a first ever year-on-year decline, albeit a small one, after several years of strong (double-digit) annual growth (as shown in the table). The continuing strong economic growth is boosting the use of grains (mostly maize) for starch manufacturing in China, which according to the IGC is expected to reach 36 million tonnes in 2011/12, up 6 percent from the previous season and 33 percent above the forecast for the United States, the largest market for starch until 2006/07.

STOCKS

Small increase in world stocks

Based on the latest forecasts for 2011 production and 2011/12 utilization, world coarse grain stocks are forecast at 168 million tonnes by the close of seasons in 2012, 1 million tonnes below their reduced opening level. At the current forecast, the **world stocks-to-use ratio** for coarse grains would fall further, from a low of 14.7 percent in 2010/11 to 13.9 percent in 2011/12. The ratio for 2011/12 is slightly higher than had been anticipated at the start of the season,

in part due to several downward revisions to utilization prospectsin 2011/12.

Ending inventories of the major exporters are forecast to total around 48 million tonnes, down as much as 12 million tonnes, or 20 percent from their already low opening level. The decline is mainly due to the supply and demand situation in the United States, where according to the latest official report, inventories are expected to shrink from the revised (higher) estimate of 32 million tonnes at the start of the season to 24.5 million tonnes by the close of the season in 2012. Lower use for feed and fuel than had been expected led to a downward revision of the total domestic utilization estimate of the United States for 2010/11. This resulted in higher ending stocks than had been predicted. The larger opening level stocks helped to improve the supply prospect for 2011/12.

Among other major exporters, only inventories in the EU are seen to decline significantly (mostly those of barley) given the expectation of total supply exceeding domestic utilization. As a result, the **major exporters' stocks-to-disappearance ratio** (i.e. domestic consumption plus exports) in 2011/12 is expected to remain at the very low level of 8.6 percent. Elsewhere, a record crop in China coupled with higher maize imports could result in an increase of 5 million tonnes in China's ending inventories, to 56 million tonnes. A significant increase in stocks is also anticipated in the Russian Federation and Ukraine following this year's production recovery.

Figure 17. US maize stocks and stock-to-use-ratio

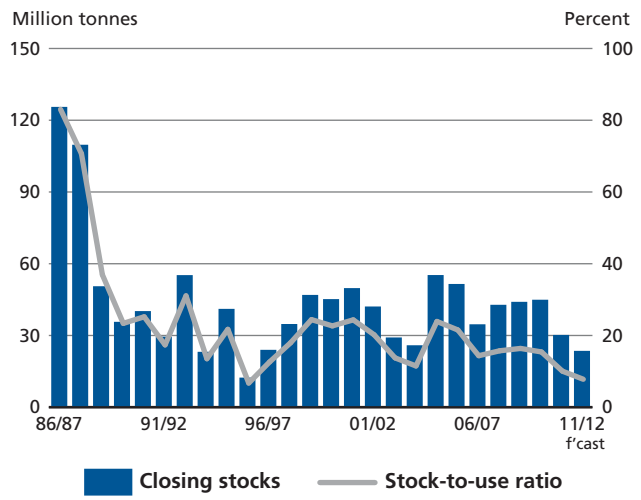


Figure 18. Coarse grain stocks and ratios

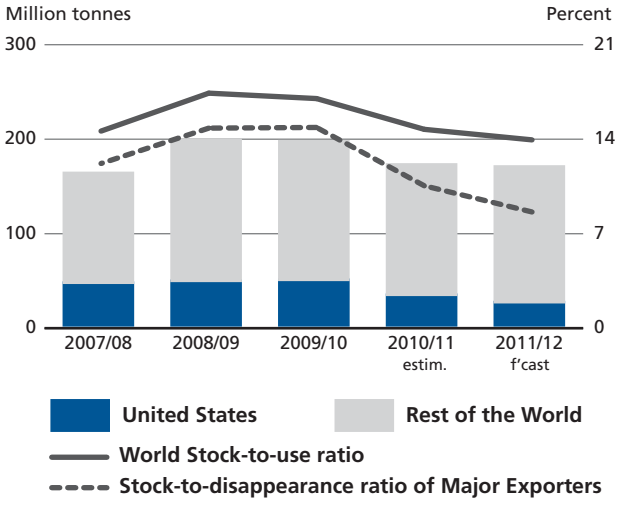


Table 6. Major Grain Policy Developments: May 2011 to October 2011 *

Country	Product	Date	Policy Instrument	Description
Argentina	Wheat	May-June 2011	Export quota	Additional 600 000 tonnes of wheat export approved from 2010-2011 crop.
	Wheat	Jun-2011	Export quota	Export of 3.0 million tonnes of wheat authorized from the 2011/12 crop (shipment from December 2011 onwards). Extra 200 000 tonnes from the 2010/11 crop also approved for export.
	Maize	May-Aug 2011	Export quota	Exports of 3.1 million tonnes of maize approved from the 2010/2011 crop.
Azerbaijan	Wheat, Rye	Jul-2011	Import tariff	VAT (18 percent) on imported wheat, rye and flours re-imposed, previously removed in December 2010.
Bangladesh	Wheat	Jul-2011	Increasing stocks	Government tenders issued to import 50 000 tonnes of wheat and 50 000 tonnes of non-basmati rice in an effort to replenish reserves.
	Wheat	Aug-2011	Trade agreement	Government–to–government deal made to buy 100 000 tonnes of wheat from Ukraine.
Canada	Wheat, Barley	Oct-2011	Privatization	The Marketing Freedom for Grain Farmers Act (Draft Legislation) removing the Canadian Wheat Board's (CWB) monopoly on wheat and barley marketing by 1 August 2012.
China	Maize	May-Sept 2011	Releasing stocks	Release of additional 3.7 million tonnes of maize (following the sale of 100 000 tonnes of maize in May) from state reserves by the end of November 2011, in an effort to boost supplies and ease domestic prices.
	Wheat	Sep-2011	Minimum support price increase	Minimum purchase price for wheat in the country's major wheat-producing areas increased, from CNY 95 to CNY 102 (USD 16) per 50 kg.
Ethiopia	Wheat	Sep-2011	Food distribution in case of emergency	Distribution of around 15 000 tonnes of wheat granted by Japan to millers hit by shortage.
	Wheat	Sep-2011	Food stocks set up	Depleted Ethiopian Food Emergency Relief Reserve (EFSRR) replenished through market stabilization interventions with 300 000 tonnes of wheat procured by the government in August 2011.
Guatemala	Maize	Jun-2011	Duty-free import extension	Extension of duty-free imports of maize beyond 21 June 2011 deadline – until the end of 2011.
India	Wheat	Jun-2011	Trade agreement	Supply of 250 000 tonnes of wheat from state reserves sent to Afghanistan, following recent droughts.
	Wheat	Jul-2011	Export quota	Export quota of 650 000 tonnes of wheat products approved, including flour and semolina, until 31 March 2012.
	Wheat	Sep-2011	Export ban	Wheat export ban, imposed in early 2007, suspended, allowing 2 million tonnes for exports, after a record crop boosted state stockpiles to more than 33 million tonnes.
	Wheat	Sep-2011	Releasing stocks	Wheat from public stocks sold in open market to create space in warehouses for rice procurement, after the record wheat crop more than doubled stocks volume.
Kazakhstan	Grains	Aug-2011	Export subsidies	Export subsidies introduced on grain shipped to the Black Sea and the Baltic Sea, compensating increased transportation costs (USD 40 per tonne).
Kenya	Maize	Aug-2011	Other import measure	Genetically modified maize imports allowed.
	Wheat	Jul-2011	Import tariff	Duty free import of wheat approved for one year, starting from July 2011.
	Maize	Aug-2011	Food stock policy	Allocation of KES 5 billion (USD 49 million) to the National Cereals and Produce Board to increase Strategic Food Reserves to more than 8 million bags of maize (where 1bag equals 90 kg).
	Maize	Aug-2011	Minimum procurement price	National Cereals and Produce Board to buy maize from farmers at a set price of KES 3 000 (USD 31.5) per 90 kg bag. The measure, valid during August–September 2011, is revised every two months. In early 2011, the purchase price was set at KES 1 800 (USD 21).

* Note: The June 2011 issue of Food Outlook covered policy developments from July 2010 to mid-May 2011
Source: FAO - GIEWS Country Policy Monitoring. http://www.fao.org/giews/countrybrief/policy_index.jsp

Country	Product	Date	Policy Instrument	Description
Mexico	Grains	Aug-2011	Finance and credit facilities	Interest rates applied to loans for grain and livestock producers decreased by 6 percent, to stimulate investment in the agricultural sector.
Moldova	Wheat	May-2011	Export ban	Wheat export ban, in force since February 2011, lifted.
Morocco	Wheat	May-2011	Marketing intervention	Wheat storage subsidy of DH 2 per 100 kg (USD 0.25 per 100 Kg) for each 15 days maintained for the purchase of soft wheat of 2011 harvest. Purchase period extended until mid-October 2011 to facilitate farmers' marketing timing.
	Wheat	May-2011	Import tariff	135 percent import tariff on soft wheat reintroduced, to support domestic production, with 80 percent import tariff for durum wheat to be restored in June-July 2011.
	Wheat, Durum	Oct-2011	Import tariff	Import tariff on soft wheat will be suspended between 15 November and 31 December 2011, together with levy applied to durum wheat imports from 1 October 2011 to 31 December 2011.
Nicaragua	Maize	Aug-2011	Import quota and tariff	Duty free import quota approved for yellow maize equivalent to 8 000 tonnes .
Russia	Grains	Jul-2011	Export ban	Export ban on grains lifted.
	Grains	Jul-2011	Financial instrument for risk management	Federal Law on the State Support of Agricultural Insurance approved, increasing guarantees of compensation payments for farmers against nature-caused risk, including losses of agricultural crops, orchards and livestock. The law reduces farmers' payment to 50 percent of insurance premium, while the other 50 percent is paid to the insurance company by the government.
	Grains	Aug-2011	Other measures affecting exports	Ban imposed by railway authorities on export grain transport to Black Sea port, Novorossiisk, the country's main outlet, due to excessive volume of grain at the port.
	Grains	Sep-2011	Export taxes	Rail taxes halved for long-distance shipments of grain from Siberia and the Urals region, to facilitate exports and reduce the need for interventions to support prices.
	Grain	Oct-2011	Export Duty	Government is considering to impose export taxes if shipments of grains exceed 24/25 million tonnes in 2011/12.
Taiwan (Republic of China)	Maize	May-2011	Import tariff	50 percent tariff reduction on maize and soybeans imports (introduced in December 2010) extended until 30 November 2011.
	Wheat	Aug-2011	Import tariff	Wheat and wheat flour import tariff halved for further 6 months.
Tanzania (United Rep. of)	Maize	Jul-2011	Government procurement from farmers	TZS 17.6 billion (USD 11 million) allocated for the purchase of 200 000 tonnes of maize from farmers, starting from 1 August. Price is set at the competitive level of TZS 350 per kg to discourage farmers from selling in neighbouring countries.

Country	Product	Date	Policy Instrument	Description
Ukraine	Grains	May-2011	Export taxes	Grains export quota system abolished and export taxes introduced: 9 percent for wheat – but not less than EUR 17 per tonnes, 14 percent for barley - but not less than EUR 23 per tonnes, and 12 percent for maize - but not less than EUR 20 per tonnes. The duties will be effective from 1 June 2011 to 1 January 2012.
	Wheat	Jul-2011	Price control	Selling price of flour produced from state reserves wheat increased. Wheat flour premium class price is set at UAH 2801.36 per tonne (USD 346.5 per tonne), wheat flour first class at UAH 2614.60 per tonne (USD 323.4 per tonne), wheat flour second class at UAH 2241.09 per tonne (USD 277 per tonne) and rye flour price is set at UAH 2114.04 per tonne (USD 261.5 per tonne).
	Grains	Aug-2011	Government procurement from producers	1.7 million tonnes of grain purchased to support producers and replenish state reserves for the winter season.
	Grains	Oct-2011	Export Duty	Wheat and maize export duties suspended. Barley duty is kept at the current level (14 percent, but at least EUR 23) and maintained until the end of 2011.
United States of America	Maize-based Ethanol	Jun-2011	Producer subsidies	Tax credit and a tariff that subsidizes ethanol production suspended, curtailing subsidies for maize-based biofuel.
	Wheat	Oct-2011	Entry into force of a free trade agreement	Free trade agreements (FTAs) passed with Colombia, Panama and South Korea.
Venezuela	Sorghum	Aug-2011	Producer prices policy	Maximum producer prices for sorghum increased, from VEF 50 per tonne (USD 170) to VEF 1 200 per tonne (USD 272).
Zambia	Maize	May-2011	Government procurement	Food Reserve Agency (FRA) purchases 1.3 million tonnes of maize between June and October, following a 2011 record maize harvest of 3 million tonnes. The procurement price is set at USD 273 per tonne (ZMK 1.3 million), similar to last year's level, despite falling market prices, to maintain farmers' income.
Zimbabwe	Grains	Jun-2011	Minimum price on food staple food commodities	Producer price set at USD 285 per tonne for maize and all grains. The Grain Marketing Board (GMB) will pay the new price retroactively to 1 April 2011.
	Maize	Jul-2011	Food distribution/food vouchers	50 000 tonnes of maize released from the Grain Marketing Board (GMB) for free distribution to approximately 170 000 households affected by reduced harvest. Households will receive vouchers to purchase grain from GMB at ward distribution points and an additional USD 10 cash to acquire other products.
	Maize	Aug-2011	Import tariff	Import duty re-established to protect local food industry, effective from August for maize meal (10 percent) and cooking oil (15 percent).
	Maize	Sep-2011	Government procurement/ Input programme	Grain Marketing Board grants about USD 10 million to pay farmers who delivered maize to its depots. Additional USD 30 million allocated for payment of inputs suppliers for the 2011/12 farming season.

RICE

PRICES

Uncertainty dominating rice markets

International rice prices resumed an upward trend in June 2011, influenced by developments in other cereal markets and by Thailand's announcement of a high producer price policy as of 7 October 2011. However, the FAO All Rice Price Index averaged 255 points in October, down marginally from 261 in September. With India's return to the international rice market place, the index again includes Indian quotations, which contributed to lowering its value in October. There was, however, little consistency of price movements across the different varieties and origins, a sign of growing uncertainty creeping up in the market, as the launching of the high producer price policy in Thailand on one side and the lifting of India's ban on non-basmati rice exports, on the other, have contrasting effects on international quotations. Macroeconomic uncertainty, a strengthening of the US Dollar and the recent dips of wheat and coarse grain prices also influenced the rice market in October. Compared with January, international rice prices gained 1 percent, sustained by an 8 and 9 percent increase in the higher and lower quality Indica, respectively, while prices of Japonica rice dipped by 10 percent and fragrant rice by 5 percent. Across the various origins, the new price policy in Thailand boosted prices of virtually all the rice types and qualities shipped from the country, with the benchmark **Thai 100% B rice, f.o.b. Bangkok**, marginally higher at USD 620 per tonne in October, but 14 percent above its level in January. Developments in Thailand had spill-over effects on other exporters, in particular Viet Nam but also the United States, which saw prices strengthen in recent months. Prices in Pakistan were generally lower than those of other suppliers and falling, as exporters strived to remain competitive *vis-à-vis* India. Prospects for prices in the next few months are highly uncertain, which is prompting importers to delay their purchases until they have a clearer vision of where prices may head.

PRODUCTION[2]

Despite heavy floods undermining crop prospects in Southeast Asia, large increases in the top producing countries boost world rice production to a record in 2011

Severe flooding continues to be reported in a number of Asian rice producing countries, raising concern about the

[2] Production figures are all expressed in milled rice equivalent, unless stated otherwise.

Figure 19. The rice to wheat price differential widens

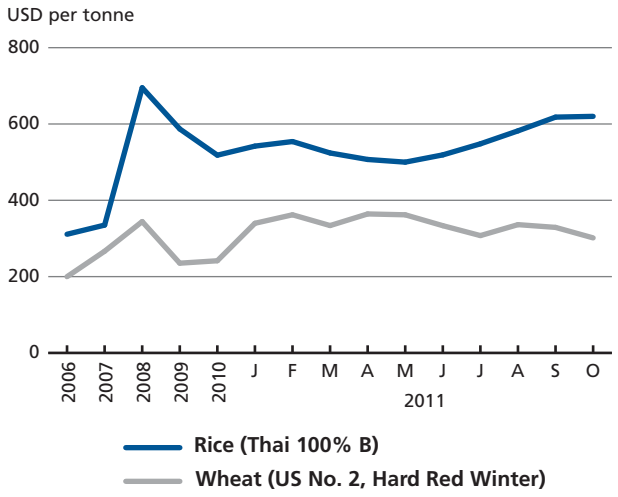


Figure 20. Rice export price (Thai 100% B, f.o.b. Bangkok)

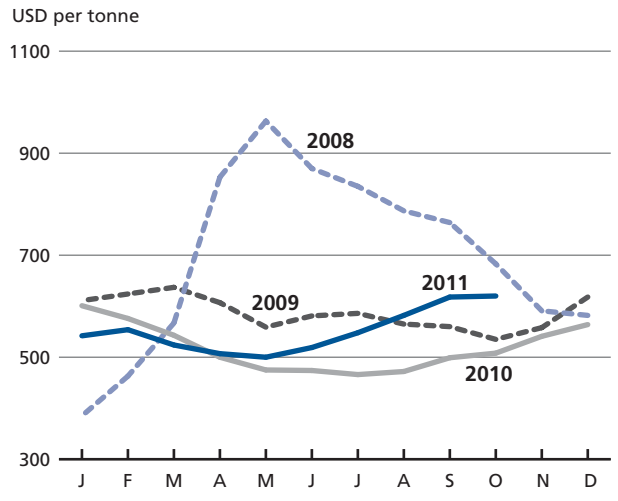
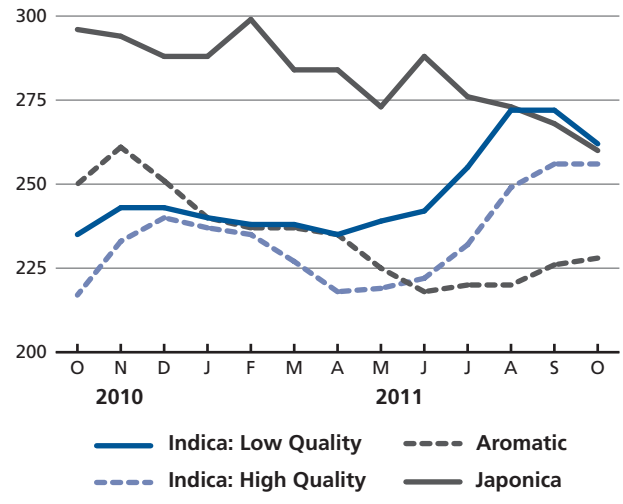


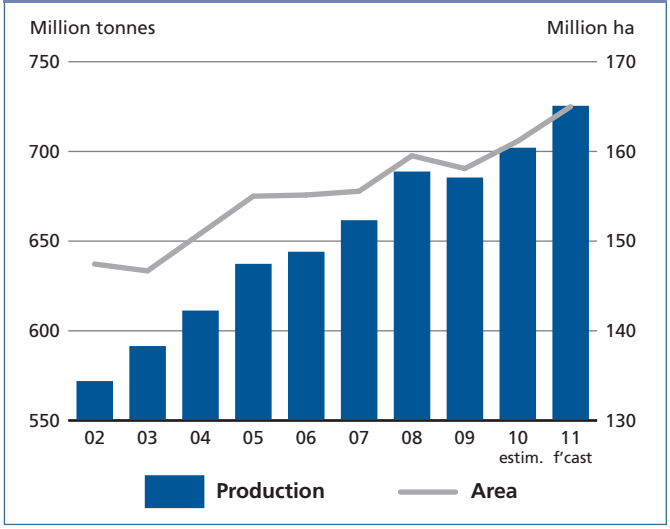
Figure 21. FAO rice price indices (2002-2004=100)



hardship caused to the affected populations, but also about the implications for rice crops. In most cases, the submerged plants are approaching the harvest stage, which leaves little scope for farmers to replant their rice fields, as they would have done if the waters had receded one month ago. Nonetheless, many will have the possibility to recoup part of the losses by expanding plantings of the 2011 secondary crops, from December to February, as the floods mean that water for irrigation will be plenty and the soil will be enriched with silt. Indeed, as far as rice is concerned, floods are far less of a curse than droughts. Although the inundations resulted in a deterioration of production prospects in **Cambodia, Lao People's Democratic Republic, Myanmar, the Philippines** and **Thailand**, FAO has raised its forecast for world rice production in 2011 by about 2 million tonnes since September. The outlook was buoyed by better crop results than originally foreseen, mostly in **Bangladesh, China, India** and **Viet Nam**. At the current estimate of 482 million tonnes (723 million tonnes of paddy), world rice production would be 3.4 percent larger than in 2010, reflecting a combination of good weather and attractive prices, which encouraged producers to expand the area under rice by an estimated 2.4 percent to 165 million hectares. Average yields are also set to rise by about 1 percent to 2.9 tonnes per hectare (4.38 tonnes, paddy basis).

The increase in world production is anticipated to be concentrated in *Asia*, where the five top producing countries, **Bangladesh, China, India, Indonesia** and **Viet Nam**, are all heading towards record outputs. **India**, in particular, is anticipated to harvest 103 million tonnes, 8 million tonnes more than in 2010, reflecting an extremely favourable pattern of the 2011 monsoon rains. Despite mid-year drought problems affecting some major rice producing provinces in the southwest, production in **China** was recently upgraded, now pointing to a 3 percent increase to 138 million tonnes. The steady upward trend witnessed over the past ten years is consistent with China's high self-sufficiency target and government support to the cereal sector, recently reiterated in the 12th five-year plan (2011-2015). Excellent monsoon rains boosted production prospects in **Bangladesh**, where farmers have been expanding rice area coverage while also shifting to high-performing rice varieties, under a government target to cover 1 million hectares with those varieties, or about 8 percent, of rice planted area. **Indonesia** is also reporting a record output in 2011, but the result falls 3.5 percent short of the government target, with drought, pest and diseases reportedly impairing also the quality of the dry season harvest. Although **Pakistan** was affected by floods again this year, they were far less destructive than in 2010 and the sector is recovering fast from last year's destruction, spurred by attractive prices. Likewise, the overflow of the Mekong River is expected to have only a limited impact on the overall season's output in **Viet Nam**, now officially forecast at a record 28 million tonnes (42 million tonnes, paddy). Production also may expand in the **Chinese Province of Taiwan, the Islamic Republic of Iran,** and **Malaysia**. In the **Democratic Republic of Korea,** the improved availability of inputs is expected to foster a small production gain, despite flooding problems. On the other hand, heavy monsoon rains and floods are forecast to reduce output to below last year's level in **Cambodia**, wiping out the benefits of an area expansion, and in **Myanmar**, where a new rice strategy, aimed at modernizing the sector, has been launched. Damage from typhoons and storms is expected to curtail production in **the Philippines** and erase the expected gain in the **Lao People's Democratic Republic.** However, of all countries, the most affected by the tide was **Thailand**, which has suffered widespread inundations since August. FAO estimates that 1.6 million hectares under the main crop were completely destroyed, equivalent to some 4 million tonnes of paddy. However, because part of the shortfall will be likely recovered with the secondary crop, especially given the very attractive prices offered under the government pledging programme, the September forecast was revised down by only 3 million tonnes in paddy terms, or 2 million tonnes, milled basis. At 21.2 million tonnes, the resulting output would be 7 percent lower than in 2010, but similar to the volume gathered in 2009. Other countries in the region that may face a contraction this season

Figure 22. Global rice paddy production and area



include **the Republic of Korea**, where a drop of plantings might bring output down to a 30-year low, **Japan** and **Sri Lanka.**

The FAO forecast for production in *Africa* has changed little since September, remaining in the order of 17.0 million tonnes, which is 2.6 percent more than in 2010. Much of the increase is expected to originate in **Egypt**, where the government lenient application of rice planting limitations and attractive prices are prompting producers to expand area and output. Despite erratic rains, the season is expected to close positively in western African countries, many of which are implementing expansionary rice production policies. In particular, output is set to rise vigorously in **Benin, Ghana, Mali, Nigeria** and **Sierra Leone,** amid attractive market prices, more than compensating for declines in **Burkina Faso, Chad, Côte d'Ivoire** and **Guinea Bissau**. In the rest of the continent, the season was impaired in **Madagascar**, Africa's second largest rice producer, by late rains in the central-east main producing area, which could depress production by about 10 percent from last year's record. Likewise, output is anticipated to fall in **the United Republic of Tanzania** and **Zambia**, constrained by poor rains, while it may rise in **Malawi** and **Mozambique,** boosted by large investments into the sector.

In Latin America and the Caribbean, the 2011 season has virtually concluded and farmers are now preparing to seed their main 2012 crop. Unlike 2010, when several South American countries suffered from erratic weather conditions, the 2011 season has been unfolding smoothly in the southern cone, which, together with high price expectation, has fostered double digit growth in **Argentina, Bolivia, Brazil, Colombia, Uruguay** and **Venezuela**. By contrast, **Ecuador, Mexico** and **Peru** are now expected to witness a decline, due to dry conditions early this year. On the other hand, recently reported serious flooding in **Honduras**, **Nicaragua** and **El Salvador** may mar current prospects for growth in those countries.

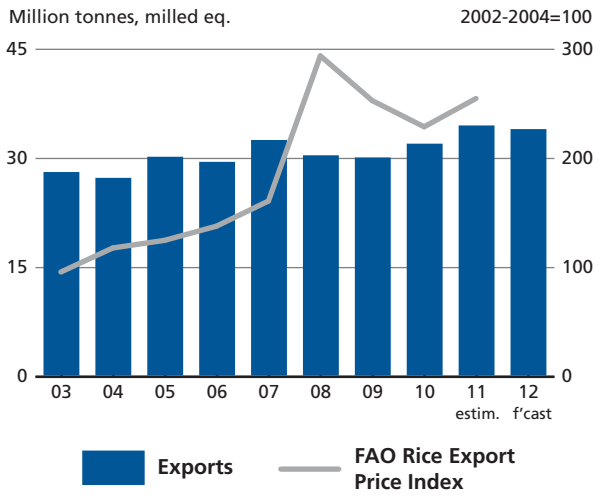
In the *rest of the world*, full water allocations to rice growers in **Australia** continued to facilitate a rebound of production to 538 000 tonnes, the highest level since 2006 and four times the volume harvested in 2010. In the **EU**, rice output looks set to rise by 1 percent to 1.9 million tonnes, spearheaded by gains in Italy, which more than offset declines in France and Spain. A sizeable increase is also expected in the **Russian Federation**, where the sector continues to enjoy high government support and border protection. By contrast, in its October rice outlook report, the USDA released a production forecast for the **United States** of nearly 6 million tonnes, implying a 21 percent decline from 2010 and the lowest performance since 1998. This season's contraction was driven by a 27 percent decrease in plantings and unfavourable weather conditions in the southern states, which particularly affected the output of long-grain rice varieties.

TRADE

Following an 8 percent expansion to an all time high in 2011, a weakening demand may depress international rice trade in 2012

FAO anticipates international rice trade to expand by 8 percent in calendar year 2011 to an all time high of 34.0 million tonnes (milled basis). Although still preliminary, the 2012 forecast points to a slightly lower level of 33.5 million tonnes, mainly reflecting a weakening of import demand, especially by large traditional buyers. Indeed, next year, both **Bangladesh** and **Indonesia** are anticipated to cut imports amid large domestic supplies. Similarly, bumper harvests are expected to enable **China** to halve the size of its purchases in 2012. These reductions are anticipated to be partly compensated by increased deliveries to **Malaysia**, **Nepal** and **the Philippines,** but also to **Jordan, Iraq** and **the Islamic Republic of Iran**. Increasing imports by African countries, particularly **Nigeria** and **South Africa**, were a major engine for trade growth in 2011. Overall, imports to the region are estimated to rise by 1.2 million tonnes, or 13 percent, to 10.6 million tonnes, facilitated, in various countries, by the reduction or lifting of import duties and taxes by governments attempting to cool domestic food inflation. As for 2012, imports to African countries are forecast to remain around this year's level, especially if

Figure 23. World rice trade and FAO rice export price index



the international price strength does not subside. In the other regions, deliveries to **Brazil** are expected to drop substantially in 2011, amid large local supplies and falling domestic prices, but they could well recover next year. Imports by the **United States** are forecast to rise in 2011 and especially in 2012, when domestic supplies will be particularly tight. Likewise, larger deliveries to the **EU** are anticipated in 2011 and 2012.

Although **Thailand** is forecast to retain its primary position among exporters in 2012, sales are expected to fall to some 8.2 million tonnes next year, down from an estimated 10.3 million tonnes in 2011. The main reason for the fall is not lack of availability, even after the recent flood-related losses, because rice supplies held by traders and in public warehouses are likely to be sufficient to make up for the production shortfall. Instead, the anticipated contraction is mainly associated with the resumption of the pledging programme at relatively high producer price levels, which is expected to translate into much higher export prices. The rice pledging scheme, for instance, set the price of white rice paddy in a range of Baht 13 800 – 15 000 per tonne (USD 460-500 per tonne), 25 to 36 percent more than guaranteed under the 2010 Price Insurance Scheme. The ensuing shift of importers to cheaper supplies is likely to boost **Viet Nam**'s sales to a record 7.3 million tonnes, with increases in deliveries also anticipated for **China** and **Pakistan**. In September, **India** lifted the restriction on regular rice exports it had maintained for four years, initially authorizing shipment of 2 million tonnes of privately-owned rice, in addition to basmati rice. As a result, around 5 million tonnes of world trade could be sourced from India next year, about 1.5 million tonnes more than forecast for 2011.

Among non-Asian countries, **Australia's** much improved availability could boost 2012 exports**.** By contrast, the May extension of **Egypt's** export ban may hinder exporters' ability to take advantage of the increase in domestic supplies to step up sales next year. So, unless the country reconsiders its policy, rice exports are unlikely to surpass 100 000 tonnes. As for **the United States,** the 2011 small crop and stiff competition from South American suppliers in traditional United States destinations are likely to result in declining rice shipments in 2012. Among non-traditional exporters, falling farm prices in **Brazil** prompted the Government to offer subsidies in 2011 to move the rice out of the southern producing states, a step that also favoured exporters. The measure, along with relatively low domestic prices, is estimated to boost Brazil's sales from 431 000 tonnes in 2010 to 1.1 million tonnes this year, turning the country's trade position from a net importer to net exporter. Unless such support is renewed, exports from Brazil could fall to some 800 000 tonnes next year, especially as farmers may switch to more remunerative crops in the coming season. Another important development for rice trade has been the consolidation of the **Russian Federation** as a net exporter in 2011. The country, which has been successful in competing with other medium grain rice suppliers, especially in central Asia and the Near East, is expected to step up deliveries further and increase its market share in 2012.

Figure 24. Rice imports by region

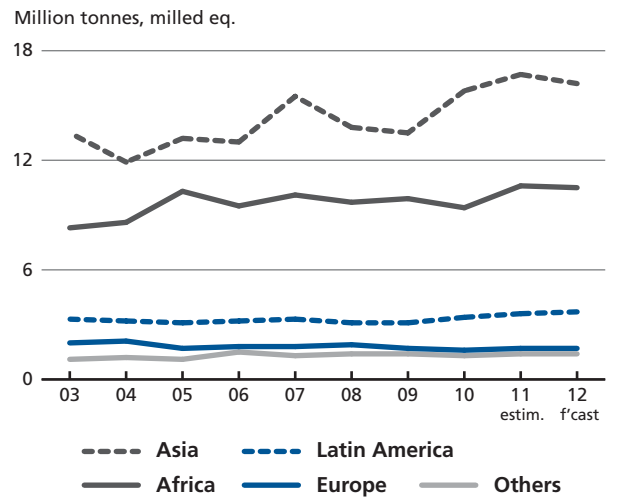
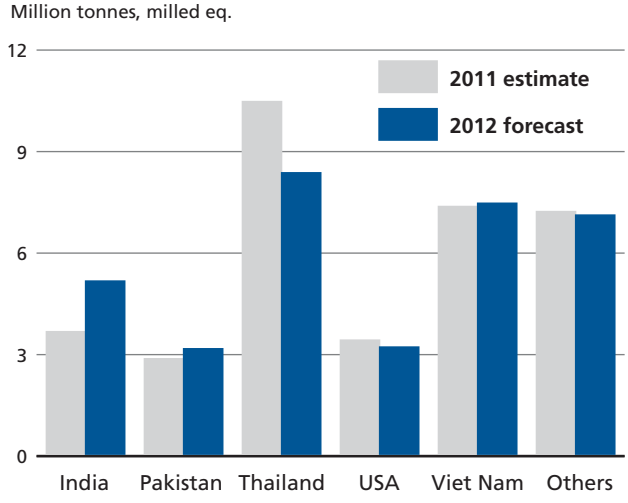


Figure 25. Rice exports by the major exporters



UTILIZATION

Large supplies expected to sustain an increase in per capita rice consumption despite prevailing high domestic prices

World rice utilization in 2011/12 is forecast to expand by 2.4 percent to 472 million tonnes (milled basis), sustained

by an increase in consumption of rice as food, close to 398 million tonnes. The combination of rice destined to seeds, non-food industrial uses and post-harvest losses is projected to rise by close to 5 percent to 62 million tonnes, with part of the increase due to flood damage to rice kept in storage in the affected countries. Very high prices of foodstuffs, in particular maize and oil meals, and abundant availability of lower quality rice are behind an estimated 3 percent increase in the use of rice as animal feed to 12.2 million tonnes. As for food, the average per capita rice consumption is forecast to approach 57 kg in 2012, about 1 percent more than in 2011. In many countries, retail rice prices maintained an upward trend (see table on domestic prices) this year, which is dampening demand growth and prompting governments to take measures to rein inflation. Some opted for raising interest rates, but others targeted rice prices directly through market interventions, releasing supplies from stocks, restricting movements of rice out of their territories or waiving taxes on rice imports (see table on policy changes).

STOCKS

World rice inventories forecast to rise to their highest level in ten years

Under current expectations of vigorous output growth, global production is expected to outpace consumption for the seventh consecutive year. As a result, 2012 world rice inventories are expected to rise by 8 percent, or 11 million tonnes, to a decade-high of 148 million tonnes. As a result, the world rice stock-to-use ratio, an important indicator of food security, is estimated to reach 31.8 percent in 2012, up from 29.3 percent in 2011. Much of the increase in world stocks is likely to be concentrated in **China** and **India**, which together are expected to hold close to 70 percent of global reserves. Elsewhere, a build up of stocks is expected in **Pakistan** and **Viet Nam,** but also in **Argentina** and **Uruguay**. Due to floods impairing both rice in the field and rice held in storage, stocks in **Thailand** are now expected to remain unchanged at around 6 million tonnes, much of which is owned by the Government, as official purchases under the pledging programme are foreseen to be large. However, the drop in production this season may require the **United States** to draw supplies from inventories, resulting in a lower carryover. Likewise, in order to meet domestic needs and fulfil expectations over shipments, **Myanmar** may also need to cut reserves. Among traditional importing countries, **Brazil** and **Indonesia** are both expected to build up stocks following good harvests this season, but **African countries,** as a whole, may hold less rice, unless they step up imports

Table 7. World rice market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**456.0**	**466.6**	**482.4**	**3.4**
Trade[1]	**31.5**	**34.0**	**33.5**	-1.5
Total utilization	**448.8**	**460.9**	**471.9**	**2.4**
Food	382.4	389.8	397.8	2.1
Ending stocks	**132.7**	**138.4**	**149.0**	**7.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	56.0	56.4	56.9	0.9
LIFDC (kg/year)	65.2	65.6	66.6	1.5
World stock-to-use ratio (%)	**28.8**	**29.3**	**31.8**	
Major exporters stock-to-disappearance ratio[2] **(%)**	**19.5**	**18.8**	**20.9**	

FAO RICE PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	253	229	252	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 26. Global rice closing stocks and stock-to-use ratio

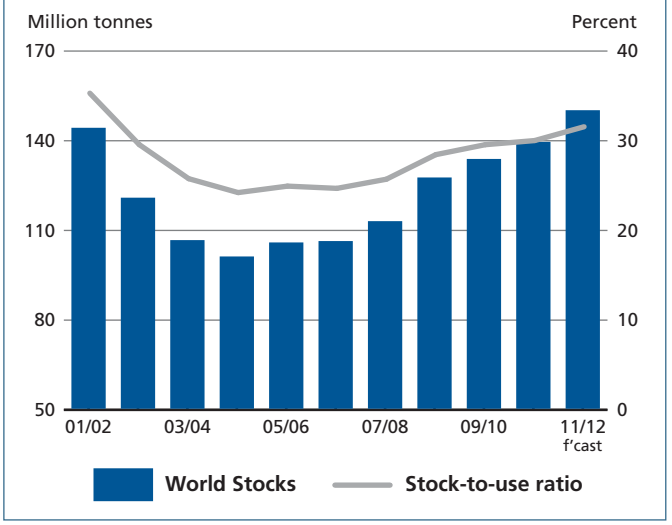


Table 8. Monthly retail prices of rice in selected markets

	Historical monthly price trend	Latest available: Month	USD/Kg	Latest quotation available compared to: /1 3 months earlier	1 year earlier	2 years earlier
ASIA	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Bhutan: Samdrup Jongkhar (white)		Sep-11	0.38	0%	-10%	20%
Cambodia: Phnom Penh (mix)*		Jul-11	0.44	13%	19%	10%
China: Hubei (indica first quality)*		Jul-11	0.54	4%	23%	28%
India: Delhi		Sep-11	0.50	4%	8%	9%
Indonesia: Ntl. Avg.		Aug-11	1.11	9%	14%	44%
Japan: Tokyo Ku-area (white)		Sep-11	5.38	2%	-5%	-7%
Lao PDR: Vientiane (ordinary first quality)		Jul-11	1.00	0%	-14%	0%
Mongolia: Ulaanbaatar		Aug-11	1.31	-1%	-9%	14%
Myanmar: Ntl. Avg.		Jul-11	0.52	-7%	4%	17%
Nepal: Kathmandu (coarse)		Aug-11	0.48	1%	3%	-1%
Pakistan: Karachi (irri)		Sep-11	0.52	8%	30%	38%
Philippines: Ntl. Avg. (well-milled)		Aug-11	0.82	0%	1%	2%
Sri Lanka: Colombo (white)		Sep-11	0.47	-9%	8%	-14%
Thailand: Bangkok (5% broken)*		Aug-11	0.52	18%	19%	-5%
Viet Nam: Dong Thap (25% broken)		Aug-11	0.47	13%	53%	72%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
WESTERN AFRICA						
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Benin: Cotonou (imported)		Aug-11	1.16	0%	0%	7%
Burkina Faso: Ouagadougou (imported)*		Sep-11	0.81	0%	20%	7%
Cape Verde: Santiago (imported)		Aug-11	1.27	2%	7%	12%
Chad: N'Djamena (imported)		Aug-11	1.14	9%	13%	12%
Mali: Bamako*		Sep-11	0.79	7%	15%	7%
Mauritania: Nouakchott (imported)		Jul-11	0.77	-24%	-24%	6%
Niger: Niamey (imported)		Jul-11	0.98	-3%	10%	0%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
CENTRAL AFRICA						
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Dem. Rep. Congo: Kinshasa (imported)		Aug-11	1.14	1%	4%	13%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
EASTERN AFIRCA						
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Burundi: Bujumbura		Jul-11	1.08	0%	2%	8%
Djibouti: Djibouti (Belem)*		Sep-11	0.73	-2%	20%	5%
Rwanda: Kigali*		Sep-11	0.85	-1%	3%	-26%
Somalia: Mogadishu (imported)		Sep-11	0.76	-1%	9%	-18%
Uganda: Kampala*		Oct-11	0.96	9%	69%	9%
United Rep. of Tanzania: Dar es Salaam*		Oct-11	0.66	-19%	-3%	-26%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100

Table 8. Monthly retail prices of rice in selected markets

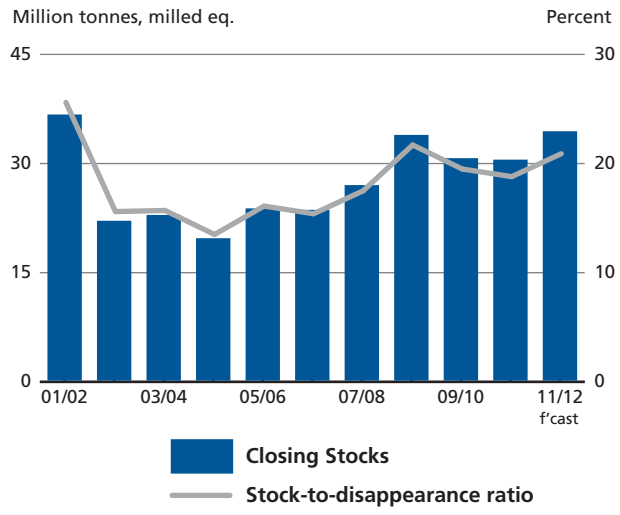
	Historical monthly price trend	Latest available: Month	USD/Kg	Latest quotation available compared to: /1 3 months earlier	1 year earlier	2 years earlier
SOUTHERN AFRICA	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Madagascar: Ntl. Avg. (local)		Aug-11	0.56	13%	10%	18%
Mozambique: Maputo		Aug-11	0.97	2%	-1%	28%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
CENTRAL AMERICA AND THE CARIBBEAN	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Costa Rica: Ntl. Avg. (first quality)		Aug-11	1.56	-4%	4%	21%
Dominican Rep: Santo Domingo (first quality)		Sep-11	1.22	-6%	0%	-14%
El Salvador: San Salvador		Aug-11	1.09	0%	0%	-19%
Guatemala: Ntl. Avg. (second quality)		Aug-11	1.11	0%	2%	0%
Haiti: Port-au-Prince (imported)		Jul-11	1.06	10%	22%	6%
Honduras: Tegucigalpa (second quality)*		Sep-11	0.82	1%	15%	-3%
Mexico: Mexico City (sinaloa)*		Sep-11	0.81	10%	33%	17%
Nicaragua: Ntl. Avg. (second quality)		Jul-11	0.91	2%	7%	2%
Panama: Panama City (first quality)		Sep-11	1.13	4%	4%	4%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
SOUTH AMERICA	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Bolivia: La Paz (grano de oro)*		Sep-11	0.91	5%	-1%	-5%
Brazil: Ntl. Avg.		Sep-11	1.06	8%	-8%	-15%
Colombia: Bogotá (first quality)*		Sep-11	1.16	-5%	18%	32%
Peru: Lima (corriente)		Sep-11	0.91	0%	21%	-5%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
NORTH AMERICA	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
United States: City Avg. (long grain, uncooked)		Sep-11	1.59	-5%	-1%	-5%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
EUROPE	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100
Italy: Milan (arborio volano)*		Sep-11	1.62	-18%	9%	30%
Russian Federation: Ntl. Avg.		Sep-11	1.44	-2%	-2%	-3%
	2007 2009 2011			-100 0 100	-100 0 100	-100 0 100

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

* *Wholesale prices.*

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

Figure 27. Stocks held by the five major rice exporters and stock-to-disappearance ratio



more than is currently envisaged. On the other hand, large purchases are anticipated to boost inventories in **Near East countries,** in particular **the Islamic Republic of Iran**.

As a group, the five major exporting countries, namely **India, Pakistan, Thailand**, the **United States** and **Viet Nam**, are anticipated to end the season with a reserve of about 34 million tonnes, compared with 30 million tonnes in 2011. As a result, their stock-to disappearance ratio (domestic consumption plus exports) is estimated to rise from 18.8 percent in 2011 to 20.9 percent in 2012. However, much of the stock build-up is expected to be concentrated in **India**, a country which has placed domestic food security on top of its agenda, meaning that rice supplies will be made available for export only after due consideration of the domestic market situation and, especially, of domestic food inflation. Thus, while typically an improvement in the ratio would indicate more ample world rice availabilities for trade, this might not be the case in 2012.

Table 9. Major Rice Policy Developments: May 2011 to October 2011 *

Country	Product	Date	Policy Instrument	Description
ASEAN +3	Rice	Oct-11	Strategic reserve	Memorandum of Understanding on ASEAN + 3 Emergency Rice Reserve (APTERR) signed, to establish a 787 000 tonne stockpile to ensure regional food security and price stability in cases of emergency.
Bangladesh	Rice	Jan-11	Food subsidies	Open market sales resumed, providing up to 5 kg of rice per person at a subsidized price of Taka 24 per kg.
	Grains	Feb-11	Food subsidies	Supplementary Fair Price Card programme launched to provide eligible households with up to 20 kg of foodgrains. Under the programme, rice to be sold at Taka 24/kg (USD 313/tonne) and wheat at Taka 20/kg (USD 261/tonne).
	Grains	Feb-11	Food subsidies	Targeted distributions of foodgrains to fourth class government workers launched.
	Rice	Apr-11	Production support	Government to provide 537 000 farmers with free fertilizers, in order to boost Aus crop production by 200 000 tonnes.
	Rice	Apr-11	Import agreement	Memorandum of Understanding signed with Viet Nam, giving Bangladesh priority in the provision of up to 1 million tonnes of rice annually.
	Rice	Jun-11	Government procurement, support prices	Boro rice procurement target set at 600 000 tonnes for the June-- September 2011 period and official purchasing prices raised by 4 percent to Taka 29/kg (USD 378/tonne).
	Rice	Jun-11	Export ban	Rice export ban renewed until 30 June 2012.
	Rice	Aug-11	Government procurement	Boro rice procurement target raised by 200 000 tonnes to 800 000 tonnes.
Bolivia	General	Jun-11	Sector policy framework	Law of Productive, Communal and Agricultural Revolution approved, as overall policy framework to guide the achievement of the national food sovereignty.
Brazil	Rice	Jan-11	Support prices	Real 303 million (USD 171 million) allocated to fund support measures for southern states through Prêmio Equalizador Pago ao Produtor (PEPRO) and Prêmio e Valor de Escoamento de Produto (PEP) programmes, with a guaranteed minimum price of Real 25.8 per 50 kg bag of paddy (USD 291/tonne).
China	Rice	Feb-11	Support prices	Government paddy procurement prices raised by 10–22 percent to Yuan 102-128 per 50 kg bag (USD 319 – 401/tonne).
	Grains	Feb-11	Production support	Package of Yuan 12.9 billion (USD 2.0 billion) allocated for drought mitigation measures.
	General	Mar-11	General, Production support	2011 budgetary allocations to the agricultural sector raised by Yuan 130.48 billion (USD 20 billion) to Yuan 988 billion (USD 155 billion), 15 percent of which is to finance direct payments to grain producers, subsidies on purchase of agricultural supplies, improved seed varieties, tools and farm machinery.
	Rice	Mar-11	Production target	Target set to increase proportion of mechanized rice planting to 45% and mechanized harvesting to 80%. Single cropping rice production systems in northeastern provinces and mid and lower areas of Yangtze river expected to be fully mechanized by 2015.
	Grains	Mar-11	Production target	Target announced to preserve arable land over 1.818 billion mu (121 million hectares), in order to ensure that annual grain production is at least 540 million tonnes by 2015.
	Rice	Sep-11	Import quota	Tariff-rate import quota for 2012 set at 5.32 million tonnes.
China (Taiwan Prov. of)	Rice	Feb-11	Stock release	65 000 tonnes of rice from public reserves to be released to the feed industry, starting in March, at a price of TWN 8.74 per kg (USD 290/tonne).
	Rice	Mar-11	Domestic consumption	Campaign to promote greater consumption of rice-based products launched, with the aim of lifting per capita rice consumption to 48.5 kg in 2011, to 50 kg in 2013 and to 51 kg in 2014.
	Rice	Apr-11	Support prices	Prices under three state purchasing programmes raised by TWN 3 per kg to TWD-20.6-26 per kg (USD 684 – 863/tonne).
	Rice	May-11	Stock release	10 000 tonnes of rice to be released from public stocks to curb unexpected increases in local prices.

Country	Product	Date	Policy Instrument	Description
Colombia	Rice	Jan-11	Import quota	40 000 tonnes approved for import from Andean Community members between February and April 2011.
	Rice	Feb-11	Production support	Funds allocated in support of rice sector, to construct drying and storage facilities, credit lines for work on irrigation infrastructure and an intensification of border controls.
	General	Apr-11	Production support	Pesos 500 billion (USD 260 million) to be disbursed in 2011 for credit, irrigation and drainage works, and for technical assistance for food production, under the new Rural Development Equity Programme.
	Rice	Jul-11	Support prices	Pesos 10 billion (USD 5.2 million) allocated for the storage incentive programme, to run from 27 July to 30 December. Up to 170 000 tonnes of dry paddy to be eligible for the programme with minimum reference prices paid to producers to range between pesos 800 000–920 000 per tonne (USD 416 – 478/ tonne) depending on the producing regions.
Costa Rica	Rice	Jan-11	Sector policy framework	Fixed producer prices to be phased out, with public support to the sector to concentrate on boosting productivity and raising the income of small and medium rice producers, while maintaining prices at affordable levels for consumers.
	Rice	Jan-11	Support prices	Court order annuls 17 percent reduction in producer prices to Colones 20 050 per 73.6/kg (USD 531/ tonne) approved in November 2010, and sets new producer price of Colones 22 604 per 73.6/kg bag (USD 599/tonne).
	Rice	Mar-11	Consumer prices	Price ceiling for type 80–20 rice lowered by 6 percent to Colones 691 per kg (USD 1 347/tonne), effective May 2011.
Cote D'Ivoire	Rice	Aug-11	Consumer prices	Following agreement with industry representatives, 25% broken rice to be sold at no more than FCFA 340/kg (USD 704/tonne) for a three-month period.
Cuba	Rice	Feb-11	Consumer prices	Imported rice permitted to be sold in the parallel food markets at Pesos 5.0 perpound (USD 216/tonne).
Dominican Republic	Rice	May-11	Support prices	Increase in producer prices of Pesos 200, to Pesos 2 100 per fanega (USD 455/tonne), approved by the National Rice Commission, to compensate for rising production costs.
	Rice	May-11	Consumer prices	Rice to be sold to consumers at no more than Pesos 22 per pound (USD 1 270/tonne).
Ecuador	Rice	May-11	Support prices	Minimum producer prices raised by 11 percent to USD 31 per sack of 90.72 kg.
Egypt	Rice	May-11	Export ban	Ban on rice exports upheld.
	Rice	May-11	Cultivation limits	Plantings to be kept within the 1.1 million feddans (462 000 hectares) limit in 2011, in order to preserve water resources.
	Rice	Sep-11	Government procurement, support prices	Plans to build a rice stockpile through local purchases announced. Volumes procured to equal half of country's annual food distribution requirements, with prices set between Pounds 1 920 and 2 000 per tonne (USD 320 – 334/tonne)
Guinea	Rice	Jan-11	Food subsidies	Imported rice to be distributed in local markets to ease pressure on prices.
	Rice	Jan-11	Export ban	Rice exports prohibited with immediate effect.
	Rice	Feb-11	Consumer prices	Fixed retail price set at Guinea franc 160 000 per 50 kg bag (USD 448/tonne) of rice.
	Rice	Jun-11	Food subsidies	Second distribution run of imported rice to local markets at subsidised prices approved.
Guinea-Bissau	Rice	Sep-11	Imports, Food subsidies	30 000 tonnes of rice to be imported and sold at FCFA 14 500–14 800 per 50 kg bag (USD 600 – 618/ tonne).

Country	Product	Date	Policy Instrument	Description
India	Rice	Jan-11	Stock release	1.0 million tonnes of rice approved to be sold through open market operations at Rupees 15.86 per kg (USD 314/tonne).
	Rice	Feb-11	Production support	"Extending the Green Revolution to Eastern India" programme renewed for a second season, with rupees 4 billion (USD 79 million) allocation, with the aim of boosting rice production in seven eastern states.
	Rice	Feb-11	Export Ban	Exception to rice export ban approved, with 150 000 tonnes of Sona Masoori, Ponni Samba and Matta rice varieties to be permitted for export to any destination, subject to a minimum export price of USD 850 per tonne.
	Rice	Jun-11	Support prices	Minimum support prices raised by 8 percent to Rupee 10 800 per tonne of common paddy (USD 214/ tonne) and 11 100 per tonne of grade-A paddy (USD 220/tonne).
	Grains	Jun-11	Food subsidies	Additional allocation of 5.0 million tonnes of subsidized rice and wheat approved for distribution under the public welfare scheme until March 2012.
	Rice	Jul-11	Export ban	Exception to rice export ban approved, permitting private traders to export 1 million tonnes of rice to any destination, subject to a minimum export price of USD 400 per tonne. An additional contingent of 500 000 tonnes of rice reserved for delivery through official channels.
	Rice	Jul-11	Export ban	Exports under 1 million tonne rice contingent, excepted from the ban on rice exports in July 2011, to be postponed until a High Court hearing.
	Rice	Aug-11	Minimum export prices	Minimum export prices of Sona Masoori, Ponni Samba and Matta rice varieties, permitted for export by February 2011 decision, lowered by USD 250 per tonne to USD 600 per tonne.
	Rice	Sep-11	Export ban	Export ban on non-basmati rice lifted. Private sector permitted to ship 2 million tonnes of non-basmati rice from own stocks through open general license. Government to monitor flow of shipments and review export decision once this 2 million tonne export mark is reached.
	Rice	Sep-11	Export ban	Court case concerning allocation of export quotas under 1 million tonne rice contingent, excepted from the ban on rice exports in July 2011, withdrawn. Given the September removal of the non-basmati rice export ban, shipments no longer expected to take place.
Indonesia	Rice	Jan-11	Production support	Plans announced to convert 104 639 ha fallow land to rice, corn, soybeans and sugar cane production. Additional rice sector support measures to include construction of 5 200 water reservoirs, rehabilitation of irrigation infrastructure, distribution of drying equipment, in addition to continuation of fertilizer and seed subsidies.
	Rice	Feb-11	Production target	Domestic production to be raised in order to allow a 10 million tonne annual rice surplus by 2015.
	Rice	Feb-11	Government procurement	Rice procurement target set at 3.5 million tonnes.
	Rice	Feb-11	Government stocks	Stocks held by Bulog to be gradually raised from 1.5 million tonnes to 2.0 million tonnes.
	Rice	Apr-11	Import tariff	Rupiah 450/kg (USD 50/tonne) rice import duty reinstituted, following a three-month suspension.
	Rice	Jun-11	Production support	Compensation of Rupiah 3.7 million (USD 407) per hectare of lost plantings to be offered to farmers having incurred losses due to adverse climatic factors or pest-attacks.
Iran Islamic Rep. of	Rice	May-11	Import restrictions	Rice imports to be restricted during harvest time, in order to protect local industry.
Iraq	Rice	Jun-11	Production support	Supplementary power allocations to be provided from mid-June to October, to permit producers in central areas to irrigate their paddy fields.
Japan	Rice	Apr-11	Cultivation limits	Rice cultivation to be banned in regions were soil samples show traces of radioactive caesium above the 5 000 Becquerel/kg threshold set following the crippling of nuclear facilities in the Fukushima prefecture.
	Rice	Jul-11	Futures trade	Resumption of rice futures trading approved, on a two-year trial basis, through the Tokyo Grains Exchange and the Kansai Commodities Exchange.
	General	Aug-11	Sector policy framework	Strategy to revitalize the agricultural sector announced. Average farm size to be raised from the current national average of 2 ha to 20–30 ha in flatlands and 10–20 ha in hills and mountainous terrains, with younger segments of the population to be encouraged to take up farming activities through incentives.

Country	Product	Date	Policy Instrument	Description
Kenya	Rice	Jun-11	Production support	Shilling 1.2 billion (USD 12 million) allocated to support the expansion of the Mwea irrigation scheme, under a projected assisted by Japan and the World Bank.
	Rice	Jun-11	Import tariff	Reduction of 75 percent rice import duty applicable under the Common External Tariff of the East African Community, approved for an additional year. Reduced duty on rice from all origins set at 35%.
Korea Republic of	Rice	Mar-11	Stock release	150 000 tonnes of rice to be released from government reserves starting in March, to curb increases in domestic prices.
	Rice	Oct-11	Production target	Rice reduction plan to continue into 2012, with paddy plantings cut by 40 000 ha.
Madagascar	Rice	Jan-11	Import tariff	Import duties and taxes on rice suspended.
	Rice	Jan-11	Food subsidies	Imported rice distributed in local markets at subsidized prices.
	Rice	Jan-11	Consumer prices	Fixed retail price set at Ariary 1 180 per kg (USD 555/tonne).
	Rice	Mar-11	Export ban	Rice exports prohibited.
Malaysia	Rice	May-11	Import rights	Padiberas Nasional Berhad's (BERNAS) exclusive right to import rice renewed to 10 Jan 2021.
	General	Oct-11	Sector policy framework	National Agro-Food Policy 2011–2020 launched, as a four–pronged strategy to boost the nations' food self-sufficiency level, raise product value addition, reinforce supply chains and increase technical capacity.
	General	Oct-11	Production support	Fund of Ringgit 1.1 billion (USD 350 million) allocated for agricultural development projects in 2012.
	Rice	Oct-11	Import agreement	Memorandum of Understanding signed with Viet Nam, guaranteeing provision of 800 000 tonnes of rice over 12 months.
Mali	Rice	Jul-11	Import quota	60 000 tonne contingent of rice to be imported free of taxes, to curb price rises during Ramadan.
Mozambique	Rice	Sep-11	Production target, production support	9 000 ha to be brought under rice cultivation in the Bella Vista Rice Project in the coming 5 years, with the aim of raising annual production by an additional 40 000 tonnes. Rice processing facilities also to be availed and irrigation infrastructure rehabilitated.
Myanmar	Rice	Feb-11	Export ban	Rice exports temporarily banned.
	Rice	May-11	Export ban	Rice export ban lifted.
	Rice	Jul-11	Export taxes	Rice export taxes reduced from 8 percent to 5 percent.
	Rice	Aug-11	Export taxes	Rice exports and those of six other commodities to be exempted from 5 percent export tax for a six-month period. 2 percent income tax still to apply.
Nigeria	Rice	Jan-11	Customs valuation	Benchmark price used for customs valuation reduced from USD 640 to USD 560 per tonne.
	Rice	Jan-11	Import restrictions	Importation of rice through land borders prohibited.
	Rice	Aug-11	Production target	Target of putting 650 000 hectares under rice cultivation, as part of Agricultural Transformation Action Plan, which aims to raise production of key foodstuffs by 20 million tonnes in four years. Efforts to concentrate on reducing reliance on imports in four years, by raising investment in parboiled rice production.
Philippines	Rice	Jan-11	Import agreement	Three-year agreement with Viet Nam renewed, giving the Philippines priority status to buy up to 1.5 million tonnes of rice annually on a government-to-government basis.
	Rice	Mar-11	Import quota	Duty free import quota of 660 000 tonnes allocated to the private sector, subject to a minimum service fee of Pesos 100 per 50 kg bag (USD 46/tonne).
	General	Apr-11	Production support	Food Staples Self-sufficiency Roadmap 2011–2016 announced, with the aim of ensuring food self-sufficiency by raising paddy production to 22.5 million by 2016, keeping average rice consumption at 120 kg per year and ensuring a 3.5 percent output growth of foodstuffs other than rice.
	Rice	May-11	Food subsidies	Pesos 4.23 billion (USD 97 million) allocated to fund a subsidy programme to assist population in coping with higher food and fuel prices, through a temporary work scheme or rice rations.
	Rice	Jun-11	Production support	Rice mechanization programme announced with a Pesos 16 billion allocation (USD 369 million), to provide farm machinery and boost drying and milling capacity through 2016.

Country	Product	Date	Policy Instrument	Description
Rwanda	Rice	Jun-11	Processing and trading	Rice certification, storage, packaging, quality standards and regulations issued.
Senegal	Rice	Feb-11	Consumer prices	Price ceiling set at FCFA 280 per kg (USD 580/tonne) on imported broken rice and FCFA 310 per kg (USD 642/tonne) on imported fragrant rice.
Sierra Leone	Rice	Feb-11	Export ban	Rice exports prohibited.
	Rice	May-11	Import tariff	10% import duty on rice suspended.
	Rice	Aug-11	Consumer prices	Imported rice prices set at LE 136 000 per 50 kg (USD 598/tonne) bag of 25% broken rice and LE 128 000 per 50 kg bag (USD 563/tonne) of 100% broken rice.
Sri Lanka	General	Feb-11	Production support	Budget of Rupees 33 billion (USD 299 million) allocated for rehabilitation works, including restoration of irrigation networks and canals damaged by recurring floods in 2011. Subsidized fertilizers also to be provided, as well as seeds free of cost.
	Rice	Jul-11	Government procurement, support prices	Paddy Marketing Board (PMB) to procure 75 00 tonnes of Yala paddy at Rupees 30/kg (USD 272/tonne) of Samba paddy and Rupees 28/kg (USD 254/tonne) of Nadu paddy.
Syrian Arab Republic	Rice	Feb-11	Import tariff	Import duty reduced from 3 percent to 1 percent.
Thailand	Rice	Mar-11	Support prices	Prices offered to producers under the price insurance scheme raised by 10 percent to baht 11 000 (USD 355) per tonne for white rice, by 5 percent for Pathum Thani paddy to baht 11 500 (USD 371) per tonne, and by 5 percent for glutinous rice to baht 10 000 (USD 323) per tonne. Maximum admitted tonnage per household under the programme raised by 5 tonnes to 30 tonnes.
	Rice	Mar-11	Government procurement, support prices	Supplementary direct purchase programme launched to buy up to 2.0 million tonnes of secondary paddy. Farmers to received same prices as those offered under the price insurance scheme.
	Rice	Apr-11	Cultivation limits	Rice cultivation to be restricted to two crops per year.
	Rice	Sep-11	Production support	Flood-affected farmers to receive compensation of Baht 3 659 per rai (USD 738/ha) of lost paddies, or Baht 1 437 (USD 46) per tonne of prematurely harvested paddy, further to being compensated for damaged rice seeds.
	Rice	Oct-11	Government procurement, support prices	Price pledging scheme reinstated, with a budget of Baht 435 billion (USD 14 billion). Producers permitted to pledge unlimited volumes of 2011/2012 main crop paddy under the programme, which is to run between October 2011 and February 2012 with prices of Baht 13 800–15 000 (USD 446-484) per tonne of white rice, Baht 15 000 (USD 484) per tonne of short-grain glutinous rice, Baht 16 000 (USD 517) per tonne of long-grain glutinous or Pathum Thani rice, Baht 18 000 (USD 581) per tonne of provincial fragrant rice and Baht 20 000 (USD 646) per tonne of Hom Mali rice. The programme is also expected to be extended to cover 2011/2012 secondary paddy crops, harvested as of March 2012.
	Rice	Oct-11	Private stocks	Traders and millers possessing 15 tonnes of rice or more required to report stockpiles to the government, in order to prevent unlawful pledging of volumes.
	Rice	Oct-11	Stock release	100 000 tonnes of rice to be released from government stocks at market prices to relieve shortages due to floods.
United Arab Emirates	Rice,			

Country	Product	Date	Policy Instrument	Description
Venezuela	General	Jan-11	Production support	"Misión Agro Venezuela" launched, with the aim of raising agricultural production and boosting the country's food self-sufficiency level. Programme to provide agricultural inputs, machinery and credit to producers of food commodities.
	General	Feb-11	Production support	Debt relief measures announced for agricultural producers impacted by adverse climatic factors during the last quarter of 2010.
	Rice	Aug-11	Support prices	Producer support prices raised by 30 percent to Bolivars 2.02 per kg of Type A paddy (USD 470/tonne) and to 2.0 per kg of (USD 465/tonne) Type B Paddy.
	Rice	Sep-11	Consumer prices	Maximum selling prices to consumers raised to Bolivars 5.62 per kg (USD 1 307/tonne) in the case of Type I rice, to Bolivars 5.23 (USD 1 216/tonne) for Type II rice and to Bolivars 4.96 (USD 1 153/tonne) for Type III rice.
Viet Nam	Rice	Jan-11	Import quota	Duty free import quota of 250 000 tonnes of Cambodian rice or paddy of all kinds permitted through December 2011.
	Rice	Feb-11	Government procurement, support prices	Member companies of the Vietnam Food Association to purchase 1 million tonnes of winter-spring paddy, starting in March, at VND 5 000 per kg (USD 250/tonne).
	Rice	Feb-11	Minimum export prices	Minimum export prices for 5% broken rice set at USD 520 per tonne and at USD 490 per tonne for 25% percent broken rice.
	Rice	Mar-11	Minimum export prices	Minimum export prices for 5% broken rice set at USD 500 per tonne and at USD 480 per tonne for 25% broken rice.
	Rice	Mar-11	Minimum export prices	Minimum export prices for 5% broken set at USD 480 per tonne and at USD 460 per tonne for 25% broken rice.
	Rice	Mar-11	Minimum export prices	Minimum export prices for 5% broken set at USD 490 per tonne and at USD 470 per tonne for 25% broken rice.
	Rice	Apr-11	Production target	41 million tonnes paddy production target set for 2011. Farmers in southern provinces to be encouraged to reduce cultivation of summer-autumn crop and raise plantings of the autumn-winter crop by 100 000 hectares.
	Rice	Jun-11	Government procurement, support prices	Member companies of the Vietnam Food Association to purchase 1 million tonnes of summer-autumn paddy, starting in July 2011, at VND 5 000 per kg (USD 250/tonne).
	Rice	Jul-11	Government procurement	Purchase of 1 million tonnes of summer-autumn paddy from local markets suspended indefinitely.
Viet Nam	Rice	Jul-11	Minimum export prices	Guidelines for calculation of minimum export prices issued. Effective August 2011, floor prices based on each standard grade's cost to exporters, plus expected profits and taxes, or relative to world benchmark prices and expected cost of delivery to destination.

CASSAVA

PRICES

After reaching new heights in 2011, international quotations of cassava products have tumbled

Monthly prices of internationally traded cassava products continued their surge in the first quarter of 2011. Quotations for **Thai cassava chips** (destined for China) reached a new high at the beginning of the second quarter of 2011, while prices for **Thai cassava flour and starch (f.o.b. Bangkok)** remained at near record levels until May on the back of dwindling export supplies in Thailand. Since then, cassava prices have been falling, as their strength affected their competitiveness *vis-à-vis* maize substitutes, with the slide intensifying in recent months.

International quotations of Thai cassava chips traded 50 percent higher in April 2011 compared with the corresponding month in 2010; likewise prices for Thai cassava flour and starch were being quoted 20 percent higher over this period. Both quotations had doubled in value when looking back a further six months. Exceptionally poor back-to-back cassava harvests in Thailand resulting in scarcity of quality raw material to feed fast-expanding industrial sectors in Southeast Asia was the major contributory factor behind the price rises. In an attempt to arrest the surge in prices and to shore up export competitiveness, Thai authorities initially intervened by releasing into the marketplace cassava products from official stockpiles, but this made little impact given the magnitude of shortages. However, as industrial users began to look for alternative sources of feedstock, by August 2011, prices had fallen back sharply from their respective 2011 highs: by 22 percent in the case of chips and by 13 percent in the case of flour and starch.

Recent declines in the prices of maize, a competitive substitute in starch and alcohol applications, notably ethanol, have also considerably lowered the demand for Thai cassava, reflected by further falls to quotations in the past few months. Moreover, the continuing slump in the demand for pellets for animal feed in traditional import markets has heavily exposed internationally traded cassava

Table 10. World cassava market at a glance

	2009	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes, fresh root eq.			%
WORLD BALANCE				
Production	**241.9**	**237.9**	**250.2**	**5.2**
Trade	**25.6**	**23.2**	**22.8**	-1.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	17.1	16.9	17.7	5.2
Developing (kg/year)	21.5	21.2	22.2	5.2
LDC (kg/year)	68.1	70.4	73.6	4.5
Sub-Saharan Africa (kg/year)	105.5	108.4	113.1	4.3
Trade share of prod. (%)	10.6	9.8	9.1	-6.6

FAO CASSAVA PRICES[1] (USD/tonne)	**2009**	**2010**	**2011** *Jan-Oct*	**Change: Jan-Oct 2011 over Jan-Oct 2010** %
Chips to China (f.o.b. Bangkok)	137	208	265	32.7
Starch (f.o.b. Bangkok)	281	507	500	0.8
Thai domestic root prices	41	79	80	5.3

[1] Source: Thai Tapioca Trade Association.

Table 11. World cassava production

	2008	2009	2010*	2011**
		(000 tonnes)		
WORLD	**239 843**	**241 890**	**237 917**	**250 062**
Africa	**125 039**	**123 180**	**126 627**	**132 119**
Nigeria	44 582	36 804	37 504	38 982
Congo, Democratic Republic of	15 013	15 034	15 049	15 215
Ghana	11 351	12 231	13 504	14 910
Angola	10 057	12 828	13 100	13 378
Mozambique	8 500	9 100	9 331	10 133
Tanzania, United Republic of	5 392	5 916	6 508	6 963
Uganda	5 072	5 179	5 000	5 000
Malawi	3 491	3 823	4 187	4 300
Benin	3 611	3 996	3 996	4 100
Cameroon	2 883	2 950	3 024	3 100
Rwanda	979	2 020	2 377	2 798
Madagascar	2 577	2 702	2 833	2 702
Côte d'Ivoire	2 531	2 262	2 450	2 653
Other Africa	*8 999*	*8 335*	*7 764*	*7 884*
Latin America	**34 201**	**32 773**	**33 029**	**35 170**
Brazil	26 703	24 404	24 354	26 132
Paraguay	2 219	2 610	2 624	2 638
Colombia	1 804	2 202	2 364	2 537
Other Latin America	*3 475*	*3 557*	*3 688*	*3 863*
Asia	**80 404**	**85 785**	**78 086**	**82 587**
Thailand	25 156	30 088	22 006	21 912
Indonesia	21 593	22 039	23 908	25 936
Viet Nam	9 396	8 557	8 522	8 863
India	9 056	9 623	8 060	8 743
China, mainland	8 300	8 700	8 000	8 500
Cambodia	3 676	3 497	4 247	5 158
Philippines	1 942	2 044	2 101	2 185
Other Asia	*1 285*	*1 237*	*1 242*	*1 289*
Oceania	**284**	**278**	**271**	**277**

* Estimate
** Forecast

Figure 28. International cassava prices (October 2008-October 2011)

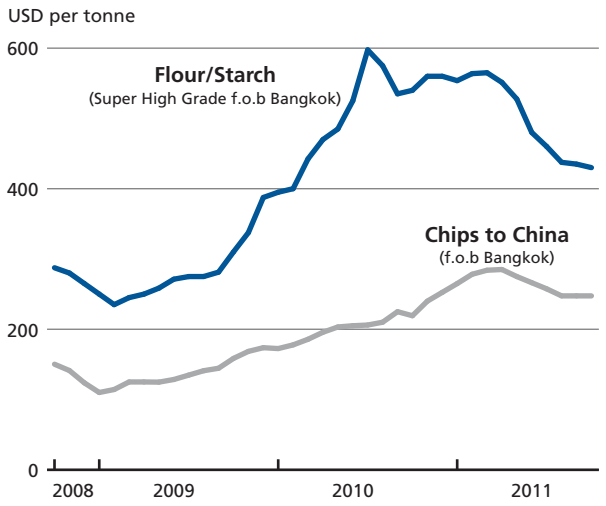
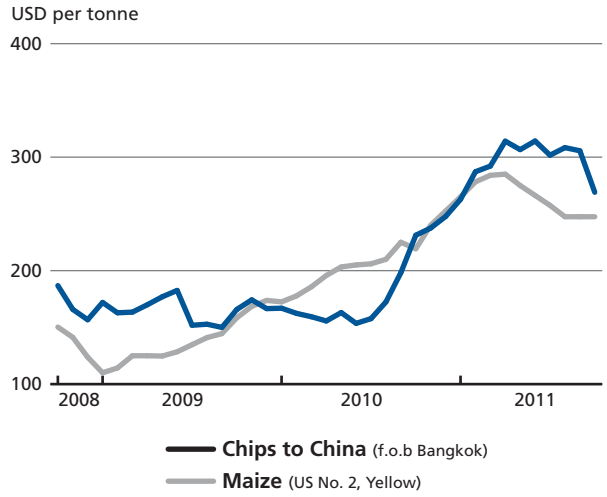


Figure 29. Maize and cassava chip prices (October 2008- October 2011)



products to the rapidly changing dynamics of industrial sectors. Cassava blended with protein-rich meals, such as soymeal, is an effective substitute for coarse grains and wheat in feed, but throughout much of 2011, adequate grain supplies in the EU has once again limited its need to import cassava feed ingredients.

PRODUCTION

World cassava production set to soar in 2011

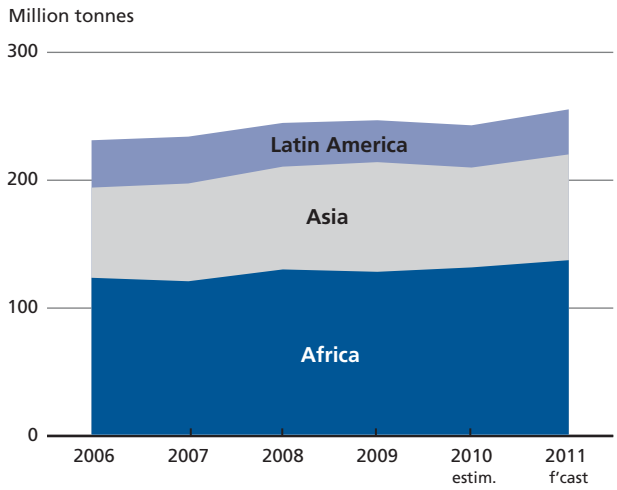
Global cassava output in 2011 is expected to rise by 5 percent from last year and to surpass 250 million tonnes for the first time. The expansion is being driven by increasing industrial applications of cassava in Southeast Asia, especially ethanol, and also by consumer demand for food cassava products, which confirms the increasingly important role played by the crop for food security, particularly in *Africa*. These diverging trends underscore a growing geographical divide between the contrasting roles of cassava in the agricultural economy of the two regions.

With little prospect of turmoil easing in global markets for staples, cassava's importance as a strategic crop is becoming more pronounced in many vulnerable countries in Africa, especially as cassava roots require few inputs and can tolerate dry weather conditions. These attributes are supporting long-term programmes for the commercialization of cassava as a food crop, principally in a processed form, and are also behind government food-security initiatives with the support of international donors. As the crop still plays an important role in subsistence agriculture, an accurate assessment of cassava production in the region is particularly difficult, but nonetheless an expansion of over 4 percent, to 132 million tonnes is foreseen in 2011.

Within the region, virtually all the major growing countries appear set to record exceptional cassava crops. Beginning with **Nigeria**, the world's leading producer, on account of higher acreage, production could rise to 38 million tonnes, well below the record of 46 million tonnes harvested five years ago, but 4 percent above the previous year. Strong domestic investment in the sector assisted by good weather is likely to propel **Ghana's** cassava output to new heights, nearing 15 million tonnes in 2011. Since 2006, the sector has grown by an average rate of 9 percent per annum. Food security drives and favourable growing conditions could also yield strong gains in **Angola**, **Mozambique** and the **United Republic of Tanzania**. By contrast, 2011 cassava output in Uganda remains highly uncertain, following flooding problems and outbreak of mosaic disease in the east of the country. While the rapid introduction of new improved varieties is providing a boost to productivity throughout the region, it also constitutes a major risk factor in the form of disease transmission, as the propagation method relies on distributing stems from potentially infected older plants.

In *Asia*, cassava production increased by 6 percent to 83 million tonnes in 2011. The industrial utilization of cassava in the form of alcohol and ethanol has been the main driver of the sizeable expansion in the crop's cultivation throughout the region, amounting to almost 60 percent in the past decade. Many sectors, principally in Southeast Asia have benefited from the allocation of additional land for cassava and from subsidies and mandatory ethanol-gasoline blending requirements.

Figure 30. World production of cassava



The region's prospects for 2011 would have been much brighter had it not been for continued difficulties in **Thailand**. The *pink hibiscus mealybug* outbreak that devastated the crop last year has not been fully eradicated, while a combination of drought and flooding problems has compounded matters. As a consequence, production is unlikely to exceed the level of 2010, which stands 8 million tonnes short of the 30 million tonnes harvested just a year earlier. Thai authorities have initiated an income support programme to assist farmers affected. Difficulties in Thailand have led to Indonesia becoming the region's principal producer. In contrast to the subregion, cassava is more important for food security than for industry in the country, where the crop has been targeted by the Government's dietary diversification programme as a substitute for rice.

In **China**, cassava production could rebound to 8.5 million tonnes after the drought which marred last year's outcome. Large-scale investments by China outside of borders to increase cassava output for ethanol production have led to the considerable expansion of the crop in **Cambodia**, **Lao People's Democratic Republic** and **Viet Nam**. In the latter country, the expansion has been moderated by policy measures to limit cassava area to no more than 450 000 ha in response to concerns about deforestation and land degradation. However, with highly attractive cassava root prices, acreage could still reach 510 000 ha in 2011, yielding an expected crop approaching 9 million tonnes. Similar environmental concerns are also mounting over the rapid expansion of cassava farming in Cambodia.

The cassava production outlook for *Latin America and the Caribbean* points to a sizeable expansion in 2011 reflecting a large increase in output in **Brazil**, the region's largest producer. Favourable growing conditions have boosted yields, resulting in a harvest increase of 8 percent, from a similar area last year.

UTILIZATION

Record world production could lead to both higher per capita cassava food intake and increased industrial utilization

Regarding **food utilization**, initiatives that promote cassava to meet rising dietary needs have been undertaken in many countries, especially in *sub-Saharan Africa*. The consumption of cassava (mostly in the form of fresh roots and basic processed products) continues on an upward trend in the region. With the expected overall production increase in 2011, per capita food availability could rise by 4 kg to around 113 kg per year. 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 boosting cassava food consumption. For instance, Brazil mandates the inclusion of 10 percent cassava flour in wheat flour and it is estimated that 50 percent of the country's cassava crop is utilized in such blending. Though several major producing countries in West Africa, especially Nigeria, have also promoted this initiative, many have fallen short of enforcement, owing to the limited availability of cassava flour.

The cassava demand from **ethanol** sectors for meeting mandatory blending will again emerge as a major engine for growth 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 China, almost 700 million litres of ethanol could be produced from cassava in 2011, requiring well over 5 million tonnes of dried cassava (also denominated "tapioca"). While the country has secured agreements with several neighbouring countries to supply its ethanol industry with the feedstock, the reduction in China's ethanol tariff has led several of them to gear up towards manufacturing and exporting the biofuel instead of the raw feedstock. In Viet Nam, the state-owned refiner PetroVietnam has announced that it will export around 85 percent of its cassava based fuel-grade ethanol production until 2013, by which time a mandate requiring 5 percent of all gasoline sold in the country to be ethanol-blended will be implemented.

Utilization of cassava as **animal feed**, in the form of dried chips and pellets, is mostly concentrated in Latin America and the Caribbean, especially Brazil. Elsewhere,

demand for cassava feed ingredients remains weak, exemplified by the total collapse in the international market for cassava pellets. For instance, in Europe, cassava applications in the manufacture of feed ingredients have been virtually non-existent in the past two years, which hitherto had been prominent. In Asia, the use of roots as a direct animal feeding stuff is also in decline, given the higher returns to be had in processing cassava roots for industrial applications.

TRADE

Global cassava trade set to contract in 2011 on the back of falling competitiveness with grain-based substitutes

At 11.4 million tonnes (chip and pellet weight equivalent), world trade in cassava products in the current year is likely to fall short of the volume traded last year and even more so, of the record of 12.8 million tonnes attained in 2009. Continued supply problems in **Thailand**, the world's largest exporter, which gave rise to record quotations combined with the improved competitiveness of maize, have contributed to a subdued global market for cassava products in 2011. Overall, Thailand is anticipated to ship around 7.4 million tonnes (chip and pellet weight equivalent) of cassava chips, pellets and starch in the year, a decline of 21 percent in volume from 2010.

International cassava trade is being increasingly driven by industrial demand of the product and quality requirements in terms of high starch content (30 percent or more) are guiding procurement decisions. With problems in sourcing competitive and quality raw material from Thailand, international buyers have begun to source cassava products from elsewhere in the region, especially **Cambodia** and **Viet Nam**.

China has firmly established its position as the most important buyer of cassava products in the international arena, accounting for around 65 percent of imports of the commodity in 2011. The emergence of China's position has been greatly assisted by domestic developments, especially policies that altered the competitiveness of maize in favour of cassava in the past[3], but with international maize prices regaining a competitive footing in recent months, buyers have increasingly switched back to the grain-based product.

Global imports of **chips and pellets** continue to be driven by the need to fulfil capacity in the rising alcohol sector (including ethanol), mostly in China. Demand for chips by the country is set to underpin world trade in this product category in 2011 by a couple of percentage points from the previous year to 6.2 million tonnes. The combined volumes of Cambodia and Viet Nam are likely to match Thailand in meeting this demand, as both countries have been able to sell chips at a discount to Thai quotations.

Concerning cassava **starch and flour**, global transactions are expected to contract by 4 percent in 2009, but Thailand is expected to easily retain its leadership as the principal international supplier. Again, the improved competitiveness of maize starch *vis-à-vis* counterpart cassava is mostly behind the contraction.

In a market orientated towards supplying neighbouring destinations, these developments reaffirm that international

Figure 31. World trade in cassava products (chip and pellet equivalent)

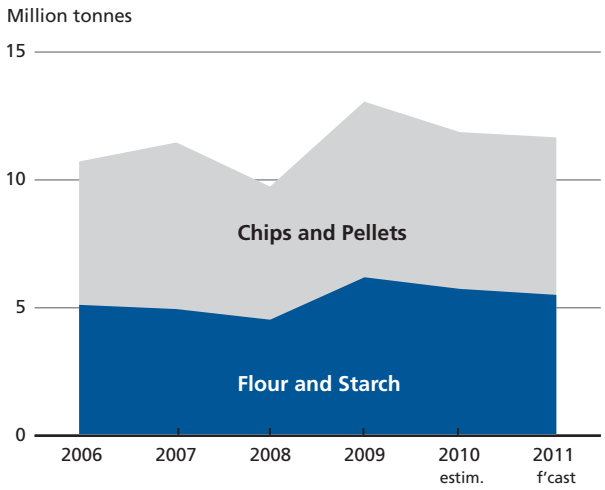


Table 12. World exports of cassava (product weight equivalent)

	2008	2009	2010	2011
	000 tonnes			
Total	**9 452**	**12 791**	**11 610**	**11 404**
Flour and Starch	**4 265**	**5 929**	**5 483**	**5 249**
Thailand	3 963	4 993	4 864	4 427
Viet Nam	946	600	250	500
Others	*302*	*335*	*369*	*323*
Chips and Pellets	**5 187**	**6 862**	**6 127**	**6 155**
Thailand	2 848	4 411	4 411	2 927
Viet Nam	437	2 000	1 200	2 000
Cambodia	170	100	250	1 000
Others	*340*	*351*	*266*	*228*

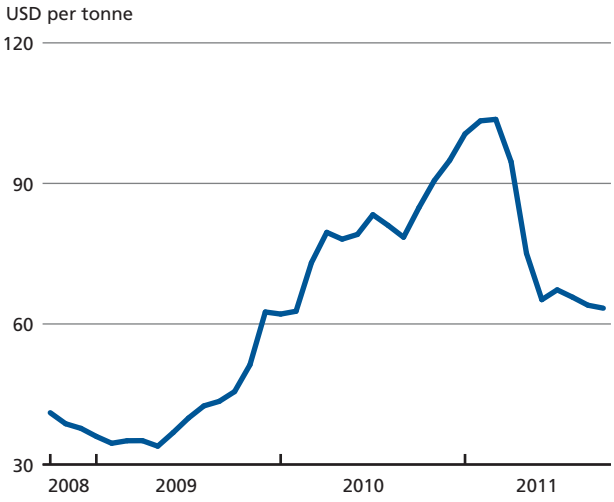
[3] Authorities in China introduced a policy in November 2009 that subsidizes domestic maize purchases to meet demand in deficit areas rather than through imports. Combined with inventory control, the policy pushed up maize prices considerably in the country, reinforcing the competitiveness of imported cassava.

Table 13. Thai trade in cassava (product weight equivalent)

	2008	2009	2010	2011
	000 tonnes			
Total	**6 810**	**9 405**	**9 275**	**7 354**
Flour and starch total	**3 963**	**4 993**	**4 864**	**4 427**
Japan	873	746	719	775
China	611	1 220	1 322	1 280
Chinese prov. of Taiwan	483	684	549	534
Indonesia	417	617	695	404
Malaysia	296	414	417	338
Others	*1 284*	*1 312*	*1 161*	*1 096*
Chips and pellets	**2 848**	**4 411**	**4 411**	**2 927**
China	1 214	4 237	4 284	2 876
Republic of Korea	480	111	35	0
European Union	989	17	0	0
Others	*170*	*46*	*92*	*51*

Source: Thai Tapioca Trade Association (TTTA), FAO

Figure 32. Thai root producer prices (October 2008 - October 2011)



cassava trade is being increasingly confined to fulfil requirements in the southeast Asia subregion. Prospects for a widening international market to other geographical regions remain elusive.

OUTLOOK

Prospects for growth in world cassava sectors in 2012 will increasingly be demarked along the lines of geography and also the role of cassava in the agricultural economy. For instance, in *Africa* the expansion in cassava cultivation not only for subsistence is set to prevail next year. The sector is providing a stimulus for rural development, poverty alleviation, food security and economic growth. Countries which are considering mandatory blends of cassava flour with (mostly imported) wheat flour, in bread making, for instance, will also reap the benefits of falling import bills and foreign exchange savings. These factors are providing cassava sectors in the region with a more assured long-term footing.

In *Asia*, the outlook remains far from certain and is being strongly guided by highly competitive procurement by industrial sectors, including starch and alcohol, including fuel ethanol. The recent return to competitively priced maize quotations relative to cassava may lead starch industries to shift towards the grain substitute and as a consequence, demand for cassava has considerably weakened. Prospects for market growth in the region will therefore depend on how the price relative evolves. As for alcohol and ethanol, rising capacity in distilleries in Asia has buoyed regional demand for cassava in recent years, but again distillers will choose among the different competing feedstocks, namely maize, sugar and cassava, the ones that maximize their returns. However, decisions to adjust overall ethanol capacity will also be guided by crude oil price developments, which are highly unpredictable.

Adding to the region's uncertainty is the production outlook for **Thailand**. With international demand tapering off, domestic root prices have fallen 40 percent from a peak of USD 104 per tonne in April of this year to around USD 60 per tonne in June, and remaining at this level thereafter. Declining root prices, cast doubt on the degree of incentive for producers to plant more and is reflected in Thailand's preliminary crop survey for 2012. Indeed, with prolonged difficulties in the control and eradication of cassava mealybug, farmers could be tempted to shift towards more remunerative crops such as sugar cane. Some respite to the regional outlook comes from rapidly growing sectors in neighbouring countries, such as **Cambodia**, **Lao People's Democratic Republic** and **Viet Nam**, especially in their ability to compete with falling international quotations of cassava and its substitutes.

OILSEEDS, OILS AND MEALS[4]

PRICES[5]

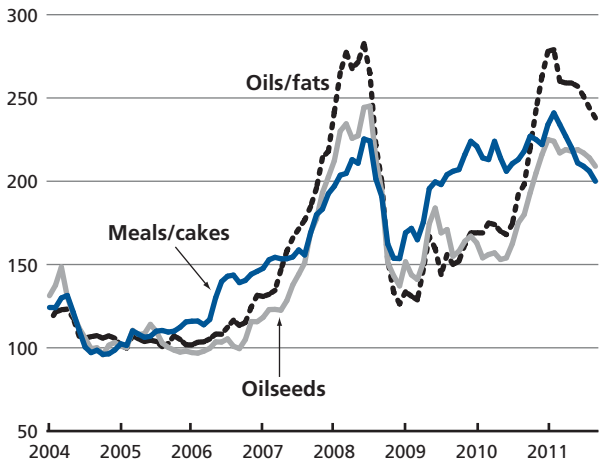
Fundamentals point towards renewed price strength in 2011/12

In the 2010/11 marketing season (October/September), international prices for most oilcrops and derived products rose until February 2011, when they came close to their 2008 peaks (as illustrated by the respective FAO price indices). Key drivers behind the price rise were a series of downward corrections in production forecasts, continued growth in the demand for vegetable oil as biodiesel feedstock, strong import demand for oilcrop products, and price spill-over effects from tight grain markets.

However, after February 2011, international prices embarked on a downward trend and by September, though still high in historical terms, the price indices for oilseed, oil and meal had fallen 7 percent, 15 percent and 17 percent, respectively, compared with their mid-season peaks. The decrease came with changes in market prospects: ample and larger than expected soybean crops were harvested in South America and Southeast Asian palm oil production began to recover ending eight months of poor growth. The improvement of crop prospects coincided with a temporary slowdown in global import demand for soybean and derived products and palm oil, resulting in an unexpected rise in inventories held by major exporters. With northern hemisphere crops entering the markets in September, supply pressure continued. Furthermore, price weakness in global feed grain markets started spilling over to the oilseed complex, and growing fear of another global economic recession, which could depress demand, began to weigh on prices.

With the onset of the new season, the market should be increasingly influenced by the supply and demand outlook for 2011/12. Based on current forecasts, notably the prospect of reduced output in two major oilcrops (soybeans and rapeseed), a tightening in the global supply and demand balance seems inevitable. To date, the market has not yet reacted to these signals: the current ample availabilities of oils and meals, the price weakness prevailing in grain markets and continued macroeconomic uncertainties have prevented prices from rising. However, 2011/12 oilcrop market fundamentals seem to call for a gradual strengthening in prices later this season. Poor growth in global supplies of oilcrops and derived products (especially oilmeals) is forecast to coincide with a steady expansion in global demand. Therefore, assuming the current forecasts materialize, the market will be faced with a drawdown in global inventories as well as a reduction in overall stock-to-use ratios – the reverse of what happened in the past two seasons. Moreover, new risks arise from the fact that global import demand will depend heavily on future supplies from South America. Finally, oilcrop markets will continue to be influenced by developments outside the oilseed complex, in particular price trends in related feedgrain and mineral oil markets and continued fears of economic recession.

Figure 33. FAO monthly international price indices for oilseeds, oils/fats and meals/cakes (2002-2004=100)



OILSEEDS

Oilseed production forecast to grow only marginally in 2011/12

World oilcrop production in 2011/12 is tentatively estimated at 472 million tonnes. Although a new record, production would grow by less than 1 percent year-on-year, compared with over 5 percent on average in the last three seasons. The slowdown would be due to reduced soybean and rapeseed crops, which are both forecast to fall by around 2 percent.

In the **United States**, the world's leading soybean producer, the just completed harvest yielded about 8 percent

[4] Almost the entire volume of oilcrops harvested worldwide is crushed to obtain oils and fats for human nutrition or industrial purposes, and to obtain cakes and meals which are 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. they do not reflect the outcome of actual oilseed crushing. 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.

[5] For details on prices and corresponding indices, see appendix Table A24 .

Figure 34. FAO monthly price index for oilseeds (2002-2004=100)

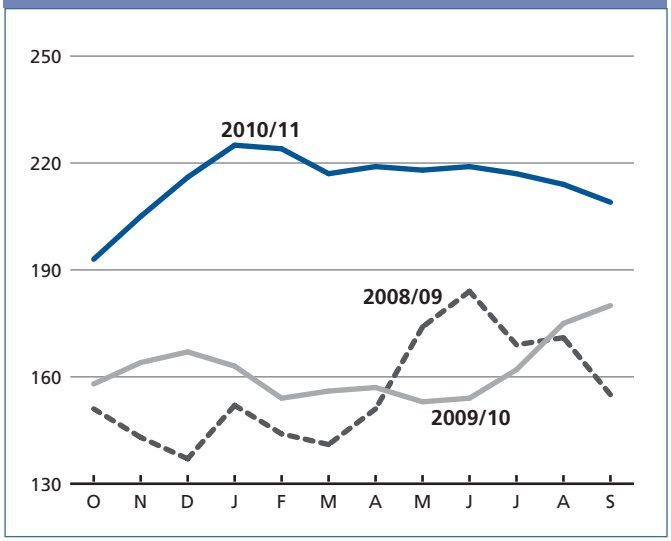


Figure 35. FAO monthly price index for oils/fats (2002-2004=100)

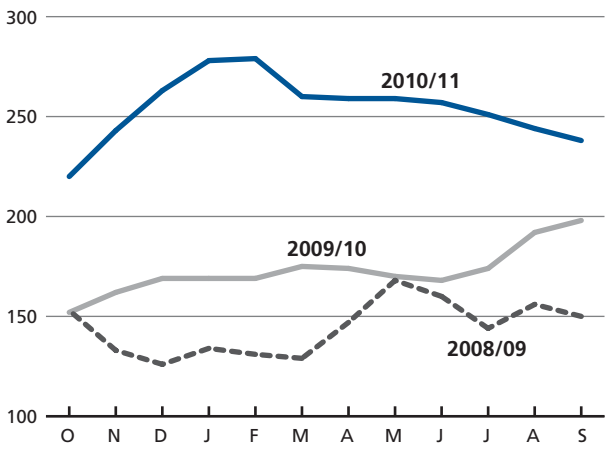


Figure 36. FAO monthly price index for meals/ cakes (2002-2004=100)

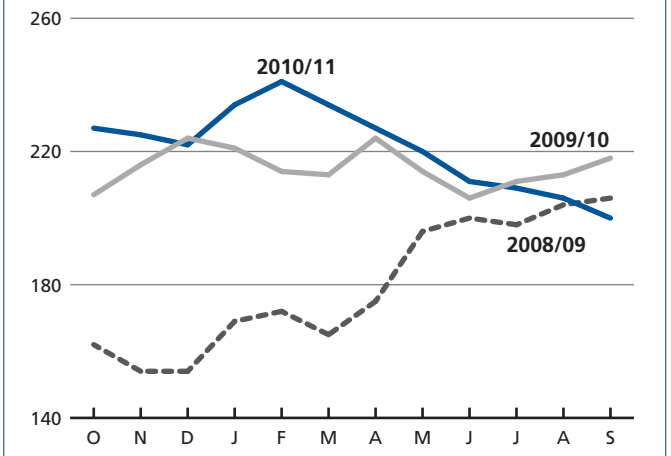
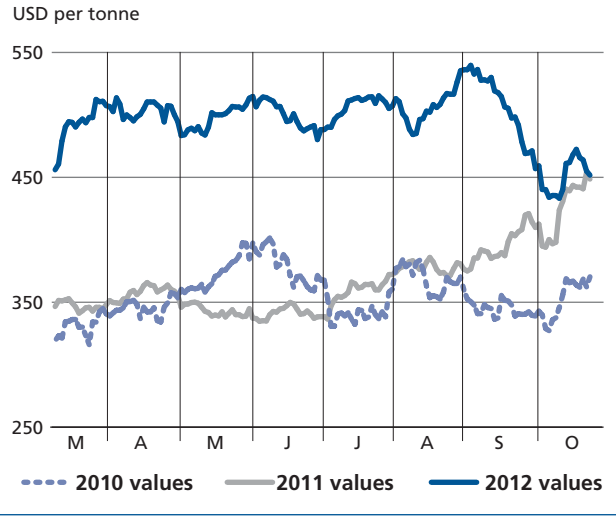


Figure 37. CBOT soybean futures for March



less than last year, with lower plantings and weather-induced yield losses contributing about equally to the decline. Due to increased competition for land, plantings of other crops, in particular maize, rose at the expense of soybeans. Lower soybean output is also reported in **China**, due to shifts in plantings and continued shrinkage in the country's arable land base, and **Canada**. In South America, where soybean plantings are underway, tentative forecasts imply a modest rise to the second highest output on record. Competition from grains and other attractively priced crops should limit this year's expansion in soy plantings. In addition, yield prospects remain uncertain as a new La Niña weather pattern might develop during the season, bringing below average rainfall to the region. **Argentina's** production is estimated to rise compared with last year, whereas a slight fall is forecast for **Brazil**.

The anticipated drop in global rapeseed production primarily reflects falls in **China** and parts of the **EU**, due to, respectively, reduced plantings and adverse weather. Record harvests in **Australia, Canada and India** should only partly offset those falls. Global production of other major oilcrops is anticipated to rise markedly, particularly cottonseed and sunflowerseed. Growth in cottonseed production is concentrated in **South** and **East Asia**, while the **Russian Federation** is driving the rise in sunflowerseed.

Table 14. World production of major oilseeds

	2009/10	2010/11 estim.	2011/12 f'cast	Change 2011/12 over 2010/11 %
	million tonnes			
Soybeans	259.9	265.8	260.7	-1.9
Cottonseed	39.9	44.8	48.0	+ 6.9
Rapeseed	61.7	60.7	59.2	- 2.5
Groundnuts (unshelled)	34.9	37.0	37.2	+ 0.5
Sunflower seed	32.5	33.1	37.5	+ 13.2
Palm kernels	11.7	12.5	13.1	+ 4.3
Copra	5.8	5.0	5.5	+ 9.3
Total	446.4	458.9	461.2	+ 0.5

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.

Table 15: World oilseed and product market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
TOTAL OILSEEDS				
Production	456.7	469.9	472.0	0.4
OILS AND FATS[1]				
Production	172.7	178.6	181.3	1.5
Supply[2]	196.1	204.9	209.8	2.4
Utilization[3]	169.9	175.2	183.6	4.8
Trade[4]	89.4	90.7	94.4	4.1
Stock-to-utilization ratio (%)	*15.5*	*16.2*	*14.5*	*-10.5*
MEALS AND CAKES[5]				
Production	114.1	117.3	116.9	-0.3
Supply[2]	128.1	136.3	137.6	1.0
Utilization[3]	107.8	113.8	119.1	4.7
Trade[4]	67.0	69.3	72.3	4.3
Stock-to-utilization ratio (%)	*17.6*	*18.1*	*15.1*	*-16.6*

FAO PRICE INDICES (Oct-Sep) (2002-2004=100)	2008/09	2009/10	2010/11	Change: 2010/11 over 2009/10 %
Oilseeds	156	162	215	32.7
Meals/cakes	180	215	221	2.8
Oils/fats	144	173	254	46.8

Note: Refer to footnote 4 in the text for further explanation regarding definitions and coverage.

[1] Includes oils and fats of vegetable, animal and marin 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.

OILS AND FATS[6]

Below average growth anticipated in oils/fats supplies

Current 2011/12 crop forecasts translate into a 1.5 percent increase in global oils/fats production to 181 million tonnes, which implies a considerable slowdown in growth compared with the three preceding seasons. Oil extraction from annual oilcrops should increase by less than 1 million tonnes. Led by the oil palm, perennial crops are forecast to add almost 2 million tonnes to total output. At 3 percent, the projected year-on-year growth in global palm oil production would however remain well below past growth rates, due to reduced expansion in mature area, in particular in **Malaysia**, as well as to the tree's yield cycle and the effects of a possible La Niña weather episode.

Global oils/fats supplies, which comprise 2011/12 production plus global 2010/11 ending stocks, should expand by about 2.5 percent, thanks to good stock positions at the beginning of this season. With regard to key producers, domestic availability is set to expand, in particular, in **Argentina**, **Brazil**, **Indonesia**, **Malaysia** and **CIS** countries. By contrast, it is forecast to remain about unchanged in **Canada**, **China** and **India**, while a pronounced drop is expected in the **United States**, owing to its poor soybean harvest. A reduction in supplies, for the second consecutive season, is also anticipated in the **EU**, following further cuts in both output and opening stocks.

Oils/fats consumption to continue expanding

Global demand for oils/fats is anticipated to continue expanding at an about average rate of 5 percent in 2011/12, reaching 184 million tonnes. Economic growth is expected to continue boosting average per capita oil consumption in many developing countries, in particular emerging economies. Further rising demand from the biodiesel industry worldwide, estimated to consume some 20 percent more than last season, should account for close to half of the projected increase in global consumption. Higher mandatory blending rates and the creation of additional production capacity in several countries continue driving growth in the biodiesel sector.

As in past years, much of the increase in global demand is expected to originate in Asia, with **China** a dominant player and with food and oleochemical uses as main areas of growth. With national consumption exceeding

[6] 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.

Figure 38. Global production and utilization of oils/fats

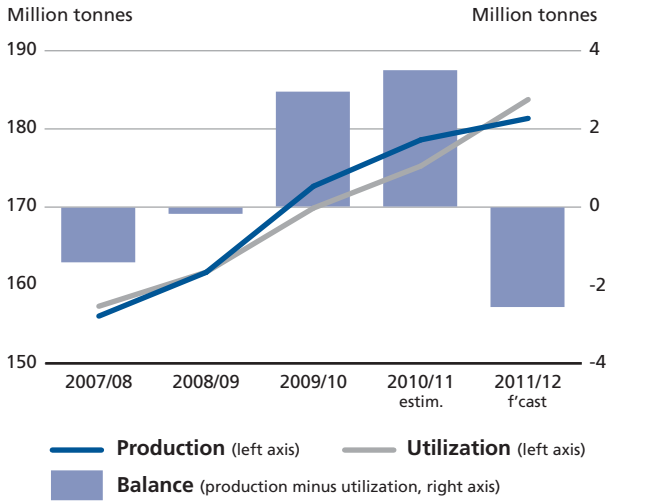
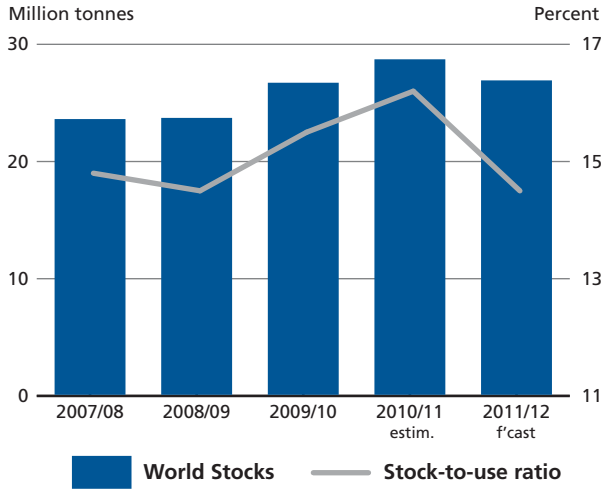


Figure 39. World closing stocks and stock-to-use ratio of oils/fats (including the oil contained in seeds stored)



34 million tonnes (almost 9 percent higher than last season), China is set to confirm its position as the world's largest consumer. In **India**, Asia's second largest consumer, year-on-year growth should not exceed 4 percent, whereas in **Indonesia**, utilization is forecast to grow more than 10 percent, reflecting further expansion in the country's palm oil refining industry. Under the lead of **Argentina** and, in particular, **Brazil**, consumption should continue rising in South America. Together, Argentina and Brazil are expected to consume 11.4 million tonnes of oils/fats, double the level recorded only six years ago. Biofuel demand is estimated to account for no less than two-thirds of the anticipated rise in consumption, as mandatory blending rates are expected to be raised to 7 percent in Brazil and 10 percent in Argentina, which is also set to further expand its biodiesel exports. In the **United States**, domestic consumption growth mainly reflects efforts by the biodiesel industry to comply with the national biofuel consumption targets. However, the industry's actual uptake will depend on whether or not the currently applied biodiesel tax credit will be extended into 2012. In the **EU**, demand seems to be stagnating because of successive reductions in domestic oil supplies and slower expansion of the biodiesel industry, due to low profitability levels.

Supply and demand balance for oils/fats expected to tighten

Unlike in the last two seasons, global production is anticipated to fall short of total demand in 2011/12. The shortfall, estimated at about 2.4 million tonnes, should lead to a decrease in global inventories. World ending stocks (measured as oil/fat inventories plus the oil contained in stored oilseeds) are projected to fall by 5 percent to below 27 million tonnes. With regard to major stockholding countries, a pronounced decrease in stocks is anticipated in the **United States**, so as to compensate for the cut in production and in **China**, to meet rising consumption. **Canada's** inventories are anticipated to fall to a seven-year low. Significant rebuilding of inventories is expected only in **Argentina** and the **Russian Federation**, thanks to domestic production increases. The anticipated fall in global inventories, combined with the projected rise in global consumption, would push the stock-to-use ratio below 15 percent and, thus, close to the critically low level recorded during the 2008 food crisis. If these forecasts were to be confirmed, firm prices are likely to prevail in the international oils/fats market during 2011/12.

Global trade in oils/fats to expand

In 2011/12, global trade in oils/fats (including the oil contained in traded oilseeds) is forecast to expand by close to 4 million tonnes, or about 4 percent. About half of the anticipated rise should be on account of palm oil, with record export availabilities in **Indonesia** forecast to boost its shipments by 6 percent. Compared with Indonesia, **Malaysia's** increase in palm oil sales should be considerably lower due to its sluggish growth in domestic production. Unlike in recent years, soybean oil is anticipated to play only a limited role in this season's global trade expansion, as South America's expected rise in exports should be largely offset by a drop in shipments from the **United States**. Instead, trade in sunflowerseed oil is anticipated to grow vigorously, given the

Figure 40. Total oil/fat imports by region or major country (including the oil contained in seed imports)

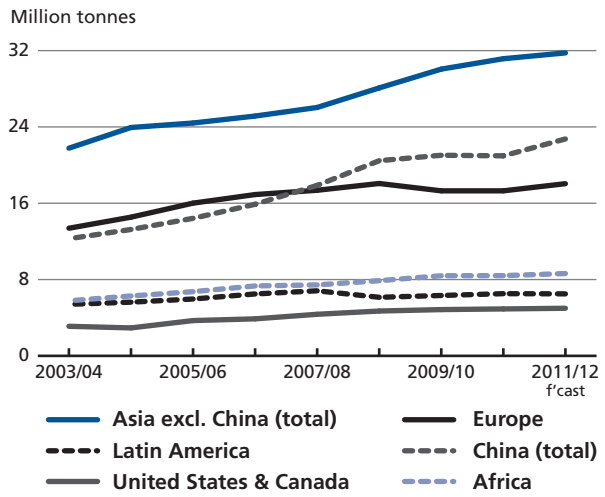
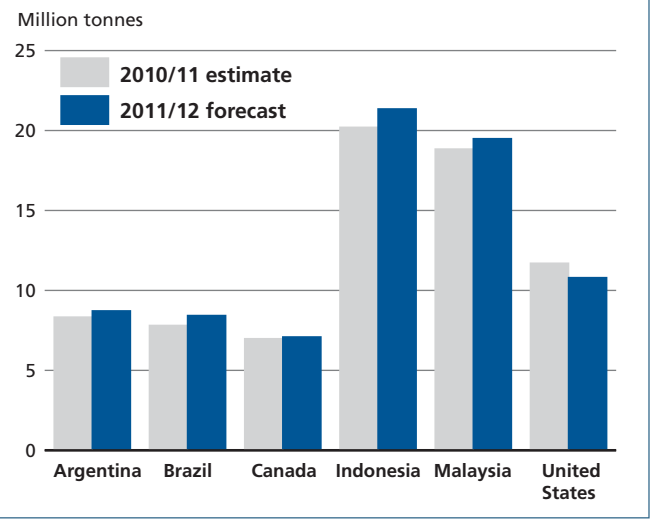


Figure 41. Oil/fat exports by major exporters (including the oil contained in seed exports)



surge in sunflowerseed production in the CIS region. More than half of the joint output of the **Russian Federation** and **Ukraine** is anticipated to reach the world market. Similar to soybean, rapeseed's contribution to the expansion in global trade should be limited, mainly reflecting lack of production growth in **Canada**. As to global oils/fats imports, most of the anticipated growth in 2011/12 is expected to occur in Asia under the lead of **China** and **India**. China's increase is set at close to 10 percent, which lifts purchases by the country to over 21 million tonnes (including the oil contained in seed imports). Continued population and income growth coupled with stagnating domestic oilcrop production explain the rise. In China as well as India, reliance on foreign purchases to satisfy domestic demand will remain high. In the **EU**, a marked increase in imports appears likely, given this year's poor rapeseed crop and additional demand from the biodiesel industry. Based on current forecasts, more than half of the EU's oils/fats consumption would be met through foreign purchases this season.

MEALS AND CAKES[7]

Global meal supplies to increase marginally in 2011/12

Assuming current crop forecasts materialize, global meals/cakes production should drop slightly compared with last season. Higher sunflower and cottonseed meal outputs will not be sufficient to offset the expected decline in soymeal production. However, thanks to ample carry-in stocks from last season, in particular near record soybean inventories, global supplies of meals/cakes, comprising 2011/12 production and 2010/11 ending stocks, are forecast to increase slightly. With regard to the main producers, poor harvests should translate into sizeable drops in domestic supplies in **China**, the **EU** and the **United States**, while abundant inventories should allow domestic meal supplies to grow in **Brazil**. In **Argentina**, a more distinct rise should be achievable thanks to the prospective rise in soybean production. Noticeable supply improvements are also expected in **India** and the **Russian Federation**, again based on good domestic crops.

Steady expansion expected in meal consumption

Steady expansion in global consumption of meals/cakes is forecast to continue in 2011/12. Commodity-wise, consumption growth is expected to concern mainly soybean, sunflower and cottonseed meal. In absolute terms, soybean meal is forecast to satisfy two-thirds of total demand. Consumption growth in the developing world should continue to outpace that of developed nations. About two-thirds of global consumption growth is anticipated to originate in Asia, where demand keeps increasing, fuelled by livestock sector expansion. The key player in this context is **China**. Despite a possible slowdown relative to the last two seasons, China's meal demand is still forecast to grow by 5.5 million tonnes. Further consumption gains are also expected in **India**, as well as in South American countries, especially **Brazil**. By contrast, poor or no growth is likely to

[7] This section refers to meals from all origins. In addition to products derived from the oil crops discussed under the section on oilseeds, this also includes fish meal and meals of animal origin.

Figure 42. Global production and utilization of meals/cakes (in protein equivalent)

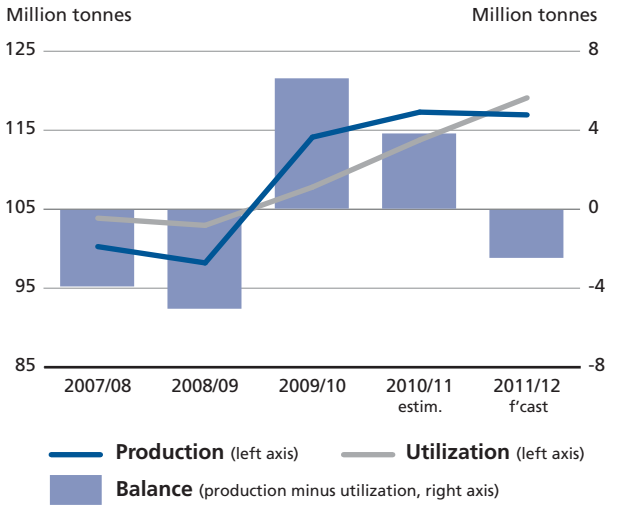
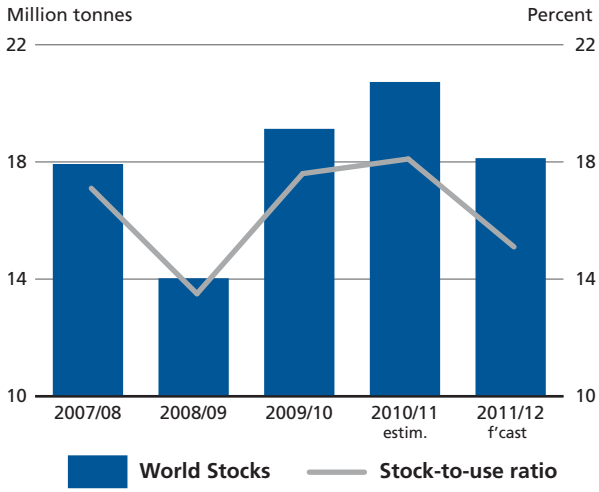


Figure 43. World closing stocks and stock-to-use ratio of meals/cakes (in protein equivalent and including the meal contained in seeds stored)



continue in Africa, Central America and Oceania. Among developed economies, demand is forecast to increase by less than 1 percent in the **United States**, keeping the level of consumption historically low, whereas in the **EU**, moderate growth could lift consumption to a new record.

Global meal production to fall short of demand

As opposed to the last two seasons when global production outpaced global consumption and allowed global inventories to grow, total output in 2011/12 is forecast to fall short of demand by over 2 million tonnes (expressed in protein equivalent), or 2 percent. The deficit should mainly concern soybean meal and, to a lesser extent, rapeseed meal. Provided these projections materialize, a sizeable reduction in global inventories will be required to satisfy demand. During 2011/12, global stocks could fall to 18 million tonnes (expressed in protein equivalents and compromising meal inventories plus the meal contained in stored oilseeds), down as much as 13 percent from the comfortable level reached at the close of last season. Among major stockholding countries, **China**, **Brazil** and the **United States** are expected to experience strong reductions in stocks, be it to satisfy internal demand (China) or to continue catering for the export market (Brazil, United States). In all three countries, inventories could fall by 20–25 percent. By contrast, in **Argentina**, the anticipated rise in production should be sufficient to rebuild meal inventories once domestic industry needs and export demand are covered. Combined, the projected rise in world consumption and the likely drop in global inventories would cause the stock-to-use ratio to fall to 15 percent, compared with about 18 percent in the last two seasons. Though not as low as during the 2008 food crisis, the expected ratio seems to point towards a progressive strengthening of international meal prices during the current season.

Continued growth expected in global meal trade

In 2011/12, world trade in meals/cakes is anticipated to grow by about 4 percent, to over 72 million tonnes (expressed in protein equivalents and including the meal contained in oilseeds traded). Soymeal should account for the bulk of the anticipated expansion. Increased demand for meals will likely be satisfied primarily by countries in South America. Thanks to a significant rise in export availabilities, the region is expected to gain back market share lost over the last few years. **Argentina's** meal shipments could rise to the second highest level on record, provided this season's anticipated increase in soybean production materializes. Record shipments are also forecast for **Brazil,** despite the likely decrease in soybean output, as releases from stocks are expected to make up for poor production. Also in the **United States**, stocks should be used to sustain exports. Nevertheless, United States shipments are expected to fall for the second consecutive season, reducing the country's share in the world market. In addition to South American suppliers, **CIS** countries are expected to raise their exports, but those increases would be less relevant at the global level. In **India**, a significant increase in shipments appears unlikely as the domestic feedstuff market is expected to absorb most of this season's rise in meal production. With

Figure 44. Meal/cake imports by region or major country (in protein equivalent and including the meal contained in seed imports)

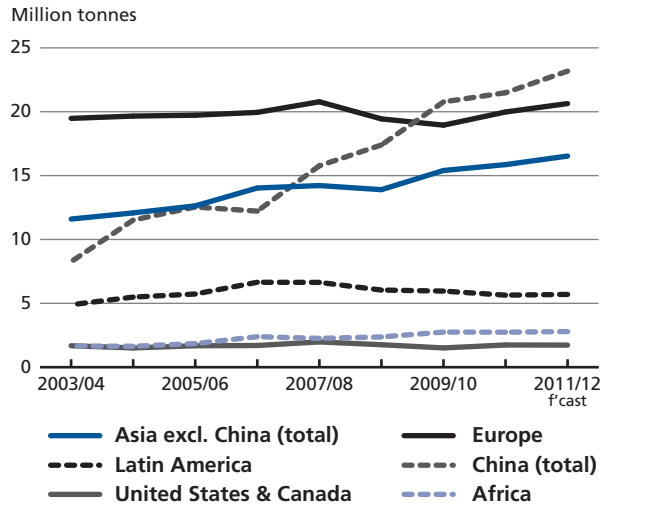
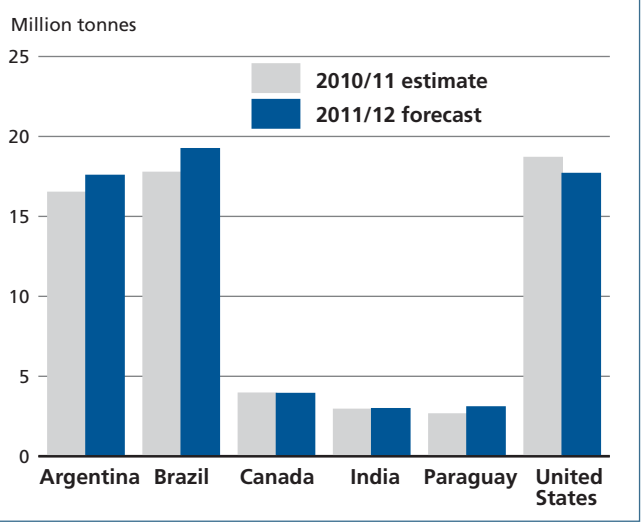


Figure 45. Meal/cake exports by major exporters (in protein equivalent and including the meal contained in seed exports)



regard to imports, large purchases by Asian countries, dominated by China, are forecast to drive global import demand. After last season's subdued growth, **China's** purchases are forecast to rise by about 8 percent, swelling to a record 22 million tonnes (in protein equivalent, including the meal contained in imported oilseeds). The forecast builds on growing demand for livestock products and further expansion in the country's crushing industry. In Asian countries other than China and India, imports also should continue to grow. Another source of global import growth would be the **EU**, given the anticipated slowdown in its domestic meal production.

Table 16. Major Oilseed Policy Developments: October 2010 to September 2011

Country	Product	Date	Policy Domain	Description
Algeria	Edible oils	Dec-10	Price control	Sales taxes and import tariffs temporarily reduced, on food staples including cooking oil, to check rise in consumer prices.
Argentina	Biodiesel	May-11	Renewable energy policies	Government-set retail price for biodiesel raised to stimulate domestic production and sales.
Australia	Biodiesel	Apr-11	Anti-dumping duties	Anti-dumping duties introduced on imports of biodiesel from the United States.
Bangladesh	Soybean oil	Dec-10	Price control	Temporary price ceilings negotiated with processors to check rise in consumer prices.
	Edible oils	Feb-11	Import policy	Import tariff reduced to shield consumers from surges in international prices.
Brazil	Oil palm	Nov-10	Land management	Rules introduced in support of sustainable forms of oil palm expansion.
	Biodiesel	Apr-11	Renewable energy policies	Introduction of mandatory B7 admixture delayed to allow more time for development of domestic feedstock base.
Canada	Rapeseed, soybean, camelina seed	Jan-11	Research and development	Public funding programmes introduced to raise domestic value addition and create new market opportunities for promising oilcrops.
	Biodiesel	Feb-11	Renewable energy policies	Nationwide mandatory B2 admixture introduced.
	Rapeseed	Jul-11	Export policy	Public funds granted for foreign market development (rapeseed and rapeseed products).
China	Soybeans	Oct-10	State reserves	State reserves increased for future market interventions.
	Soybean oil	Nov-10	Import policy	Stringent quality requirements for soybean oil imports (introduced in April 2009) suspended.
	Soybeans, soymeal, soybean oil, palm oil	Nov-10	Price control	Regulation of futures exchanges tightened to deter speculation on commodity markets and check rise in consumer prices.
	Rapeseed & rapeoil, soybeans & soyoil	Dec 10 to Sept 11	State reserves	State reserves released to check rise in consumer prices; preferential access to state auctions granted to manufacturers that agree to cap retail prices; and subsidies granted to crushers buying from state reserves.
	Biodiesel	Dec-10	Renewable energy policies	Biodiesel from consumption taxes (applied retroactively from January 2009).
	Edible oils	Dec 10 to Aug 11	Price control	Negotiated temporary price freeze for cooking oil with major retailers to check rise in consumer prices.
	Rapeseed	May-11	State reserves	State reserves reconstituted for future market interventions.
	Biodiesel	Jul-11	Renewable energy policies	Complete trade standard launched for regulation of biodiesel production, distribution and sales.
	Edible oils	Jul-11	Market regulation	Inspection of cooking oil at public food outlets introduced, to enforce quality standards and deter illegal trade.
	Soybeans	Jul-11	GMO policies and regulations	Official GMO-free soybean cultivation area established to distinguish domestic production from imported GMO soybean.
CIS (Russian Federation, Belarus, Kazakhstan)	Soymeal	June to July 2011	Import policy	Soymeal import tariffs temporarily suspended to counter domestic feed grain shortages.

Country	Product	Date	Policy Domain	Description
Ethiopia	Edible oils	Jan-11	Price control and market intervention	Temporary ceilings set on cooking oil retail prices and public sales introduced.
	Edible oils	Jan-11	Consumer safety	Licenses from selected vegetable oil refiners withdrawn due to quality concerns.
European Union	Biodiesel	Jan-11	Renewable energy policies	Release postponed of guidelines on the impact of land use changes (ILUC) on carbon savings in biofuel utilization in order to ensure best available science is used.
	Animal feedstuff	Feb-11	GMO policies and regulations	Regulations on traces of unauthorized GMO in animal feed consignments loosened in order to safeguard foreign supplies of protein feeds to the EU.
	Biodiesel	May-11	Renewable energy policies	Anti-dumping duties levied on imports of biodiesel from the United States extended to purchases from Canada.
	Biodiesel	Jul-11	Renewable energy policies	Support given to industry-wide initiative to promote renewable, sustainably produced aviation fuel.
	Biodiesel	Jul-11	Renewable energy policies	Seven voluntary schemes for certification of sustainable biofuel production methods approved.
	Olive oil	Sept 11 to Feb 12	Market support	Support payments granted for private storage to address short-term marketing problems.
Ghana	Oil palm	Nov-10	Sector development assistance	Oil palm master plan developed to meet local demand and improve competitiveness as regional exporter.
India	Edible oils	Oct-10	Export policy	Ban on bulk edible oil exports extended until September 2011.
	Rapeseed, copra	Nov/Dec 2010	Farm support prices	Procurement price raised for rapeseed and copra.
	Palm oil	Feb-11	Import policy	Tariff on crude palm stearin abolished.
	Cooking oil	Feb-11	Government procurement	Procurement of edible oils increased to assist low-income consumers through public welfare schemes.
	Oil palm	Mar-11	Sector development assistance	Public funding granted for establishment of new oil palm plantations to stimulate domestic palm oil production.
	Edible oils	Mar to Sept 2011	Market regulation	Limits on volume of edible oil and oilseeds traders may hold in stock extended (to prevent hoarding and price rises).
	Soybeans, groundnut	Jul-11	Farm support prices	Farm support prices raised to sustain national oilseed production.
	Palm oil	Jul-11	Bilateral trade	Free trade agreement signed with Malaysia including tariff concessions for imports of Malaysian palm oil.
	Edible oils	Sep-11	State trading / Food assistance	State import programme for public distribution at subsidized prices extended until September 2012.
Indonesia	Palm oil	Oct 10 to Sept 11	Export policy	Sliding export tax regime maintained to ensure adequate domestic supplies and prevent hikes in consumer prices.
	Soybeans	Jan-11	Import policy	Soybean import duties suspended to stabilize markets and increase supplies.
	Oil palm	May-11	Environmental policy	Two-year moratorium introduced on forest clearing and peatland conversion (for establishment of plantation crops).
	Oil palm	Aug-11	Market regulation	Mandatory certification introduced for sustainable production methods for all plantation firms and smallholders cultivating oil palm.
	Palm oil	Sep-11	Bilateral trade	Free trade agreement signed with Pakistan, including reduction of Pakistani import duty on palm oil from Indonesia.
	Palm oil	Oct-11	Export policy	Modified upper and lower boundaries applied under the sliding export tax regime with a view to promoting shipment of refined (high value) palm oil.

Country	Product	Date	Policy Domain	Description
Japan	Edible oils & fats	Jan-11	Health policy	Moved to voluntary disclosure of levels of trans fatty acids in food products to reduce risk of cardiovascular diseases.
Kazakhstan	All major oilseeds and their oils	Oct 10 to Mar 11	Export policy	Temporary export ban applied.
Liberia	Oil palm	Jan-11	Sector development assistance	Concessions granted to foreign investors for establishment of large-scale oil palm plantations.
Libya	Edible oils	Feb-11	Import policy / Market regulation	Custom duties and domestic sales taxes suspended on edible oils to check rise in consumer prices.
Malaysia	Oil palm	Jan-11	Sector development assistance	New oil palm replanting scheme launched to raise productivity in oil palm cultivation, including measures specifically geared toward smallholders.
	Palm oil	Jan-11	Market regulation / Food assistance	Edible oil producers ordered to raise sales of palm oil at subsidized prices to prevent artificial shortages on domestic market.
	Palm oil	Jan-11	Bilateral trade	Free Trade Agreement with India in force, including reduction of Indian import duties on Malaysian palm oil.
	Palm oil	Mar-11	Renewable energy policies	Phased introduction of mandatory B5 admixture initiated, accompanied by tax exemption and variable subsidy.
	Palm oil	Jun-11	Renewable energy policies	Public funds allocated to petrol companies for investment in infrastructure for biodiesel blending.
	Palm oil	Sep-11	Environmental policy	Public-private partnerships promoted for waste product recycling in the palm oil milling process.
Mozambique	Biodiesel	Jul-11	Renewable energy policies	Regulation mandating nationwide B3 admixture by 2012 passed into law.
Pakistan	Rapeseed	Nov-10	Emergency assistance	Concessional and interest-free loans offered to help farmers recover from impact of floods.
	Sunflower	Jan-11	Farmer support	Negotiations conducted with the private sector concerning rises in the farm-gate price (to stimulate domestic production).
	Edible oils	Jul-11	Market regulation / Competition policy	National association of cooking oil manufacturers forbidden to coordinate costing and pricing activities.
	Palm oil	Sep-11	Bilateral trade	Free trade agreement signed with Indonesia, including tariff concessions on palm oil imports from Indonesia.
Philippines	Coconut	Jan-11	Sector development assistance	Six-year programme presented, to raise productivity in coconut cultivation.
South Korea	Soybeans	Feb-11	State reserves	Inclusion of soybeans in public reserves announced, to stabilize domestic supplies.
	Soybeans	Mar to Dec 2011	Import policy	Import tariff temporarily reduced.
Sri Lanka	Edible oils	Nov-10	Import policy	Taxes applied on palm and coconut oil imports reduced to check surge in consumer prices.
	Coconut	Jan-11	Sector development assistance	Chemical fertilizers offered to producers at subsidized prices to raise coconut production.
Tanzania	Edible oils	Mar-11	Sector development assistance	Manufacturers using home-grown oilseeds exempted from paying VAT to stimulate demand for local oilseeds.

Country	Product	Date	Policy Domain	Description
Thailand	Palm oil	Nov-10	Market regulation / Price control	Temporary controls on palm oil stockholding and sales introduced to protect consumers from unusual price rises. Temporary retail price caps imposed, accompanied by compensatory subsidies to crushers/ manufacturers.
	Palm oil	Jan-11	Trade & market regulation / Food assistance	One-time palm oil import permissions granted; public sales introduced at subsidised prices; and biodiesel production/consumption targets adjusted to safeguard domestic supplies.
	Soymeal	Jan-11	Import policy	Reduced import duty on soymeal extended for one year to secure domestic feedstock supplies.
	Soybean oil	Apr-11	Food assistance	Temporary controls introduced on soybean oil retail price.
Uganda	Oil palm	Nov-10	Sector development assistance	Support to national oil palm development project renewed to foster domestic production.
Ukraine	Sunflower seed & oil	Feb-11	Trade & market regulation	Agreement reached with private sector to restrict exports temporarily, so as to secure domestic supplies.
United Arab Emirates	Biodiesel	Jul-11	Renewable energy policy	Private sector partnership established to produce biodiesel from recycled cooking oil.
United States	Olive oil	Nov-10	Food safety	Voluntary standards launched for domestic and imported olive oils to ensure consistency and transparency in labelling.
	Biodiesel	Dec-10	Renewable energy policies	Extension of biodiesel tax credit approved until Dec. 2011 (as well as, retroactively, for entire 2010) to encourage production.
	Camelina seed	Jul-11	Renewable energy policies	Production subsidies granted to farmers entering into production of camelina seed as alternative biodiesel feedstock.
	Soybeans	Jul-11	Research and development	Funding provided for research on farming techniques that will help farmers adjusting to climate change.
	Rapeseed oil	Sep-11	Renewable energy policies	Use of Canadian rapeseed oil approved for US biodiesel production and consumption.
Venezuela	Soybeans	Aug-11	Farmer support	Soybean farm-gate prices increased to stimulate domestic production.

SUGAR

PRICES

Macroeconomic uncertainty and the prospect of a production surplus for 2011/12 behind the recent decline in international sugar prices.

Since the beginning of 2011, international sugar prices have displayed high volatility, with a succession of peaks and troughs. After reaching a 30-year high of US cents 29.61 per pound in January 2011, prices declined steadily to average US cents 22.00 per pound in May, before increasing to US cents 28.20 per pound in July. Soon after, prices decreased for three consecutive months, reaching an average US cents 25.45 per pound in October. Still, prices remained relatively high compared with the decade through 2010. The recent easing of sugar prices reflects a combination of factors including improved global supply prospects for the new season 2011/12; risks associated with the less favourable outlook for the world economy, which is expected to curtail demand; easing of energy prices since April; and the appreciation of the US Dollar with respect to the currency of major exporting countries.

PRODUCTION[8]

World sugar production to increase in 2011/12

According to the latest FAO estimates, world sugar production is set to reach 173.1 million tonnes in 2011/12, which represents an increase of 4.1 percent over the 2010/11 season. The expected growth is attributed to an overall expansion in areas planted to sugar cane and beet in response to relatively high sugar returns. Also, higher prices witnessed over the past 12 months fostered an increased use of fertilizers and other inputs. The bulk of the expansion is expected to take place in developed countries, where production is forecast to expand by 11.9 percent, compared with an expected 2 percent growth in developing countries. Under this current forecast, world production in 2011/12 would be more than sufficient to cover consumption. The surplus, predicted to hover around 6.5 million tonnes, will likely be subject to revisions as the season progresses, given weather-related uncertainties.

In *South America*, production is predicted to contract by 6.3 percent in 2010/11, driven by a reduction in **Brazil.** The fall in output is due partly to unfavourable growing and

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

Figure 46. International Sugar Agreement (ISA)

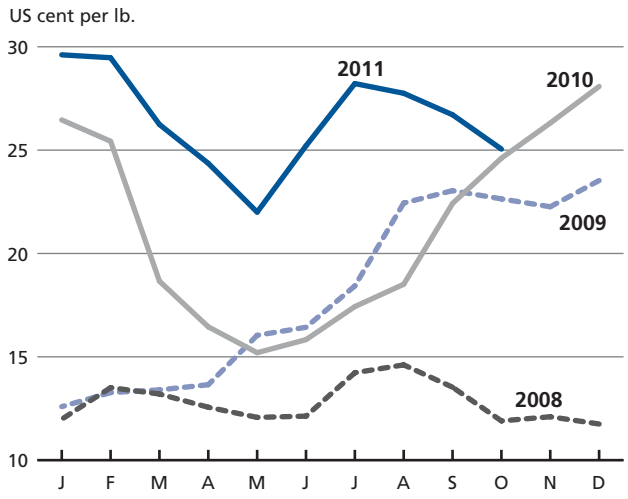


Table 17. World sugar market at a glance

	2009/10	2010/11 estim.	2011/12 f'cast	Change: 2011/12 over 2010/11
	million tonnes			%
WORLD BALANCE				
Production	**156.7**	**166.3**	**173.1**	**4.1**
Trade	**58.1**	**51.3**	**48.1**	-6.1
Total utilization	**162.6**	**164.1**	**166.6**	**1.5**
Ending stocks	**54.8**	**56.5**	**62.3**	**10.3**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	23.8	23.8	23.8	0.4
LIFDC (kg/year)	16.3	16.0	16.1	0.2
World stock-to-use ratio (%)	**33.7**	**34.4**	**37.4**	

ISA DAILY PRICE AVERAGE (US cents/lb.)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	18.1	21.2	26.5	31.8

Table 18. World sugar production

	2010/11	2011/12
	million tonnes	
Asia	61.9	66.5
Africa	10.9	11.7
Central America	11.7	12.1
South America	47.2	44.2
North America	7.6	7.6
Europe	22.8	26.6
Oceania	4.1	4.4
World	**166.3**	**173.1**
Developing countries	129.0	131.4
Developed countries	37.2	41.7

HOW DO HIGH SUGAR PRICES TRANSMIT TO PRODUCERS?

The 2011/12 marketing year is expected to generate a large production surplus, hovering around 6.5 million tonnes, mainly in response to increases in area allocated to sugar cane and beet in key producing regions. Following two years of relatively high and remunerative sugar prices, farmers responded by boosting land and other productive resources in favour of sugar crops. A review of the structure of the sugar industry in key producing countries reveals that, in most cases, there are two systems which determine the price received by farmers.

The most common structure is based on a revenue-sharing formula between farmers and sugar factories. When market tightness leads to higher domestic sugar prices, the formula ensures that these benefit farmers while also providing a clear incentive to expand output. The percentage of the final sugar price that is received by farmers varies across countries and ranges from 54 percent in Guatemala to 60 percent in Brazil, 70 percent in Thailand and 72 percent in the Russian Federation.

The other common form of sugar industry structure calls for governments to regulate the price of beet and cane paid to farmers, as is the case in the EU and India. This implies that producers may not benefit directly from increases in market sugar prices, unless national authorities raise the administered cane and beet prices so as to reflect market tightness. However, under certain conditions, sugar factories may be forced to increase the price they offer farmers to above the administered price. For example, increased reliance on attractive export markets will lead sugar factories to raise the price they offer to farmers in order to secure supply. Or, because sugar crops compete for land and other inputs with alternative crops, notably cereals and oilseeds, sugar factories must offer farmers a price that is at least competitive with the price they would receive for the competing crops. Indeed, through the principle of substitution, farmers will allocate resources away from sugar crops if the next best alternative offers higher returns. Because prices of cereals also have increased over the recent years, sugar factories have been compelled to raise their sugar offer prices above the minimum price to attract farmers. In India, for example, wheat prices rose by about 75 percent between 2006/07 and 2010/11. At the same time, sugar mills raised their price offer to cane producers by about 89 percent, well above the 60 percent hike in the sugar administered state price. Hence, even under a system of administered farm prices, competition among sugar factories to secure supply can translate into high cane and beet farm prices.

Even though producers may not reap the full benefits of rising market prices, part of the increases will be transmitted to them, even in those cases where producer prices are administered by governments. This explains the large expansion in sugar beet and sugar cane plantings observed in the past two years.

harvesting conditions, but also to investment cuts at both farm and mill levels, which negatively affected yields. In 2011/12, estimates indicate that total sugar-cane production will drop by 11 percent from the previous season. By the end of the 2011/12 season, an estimated 48.5 percent of total sugar-cane harvest will be allocated for the production of sugar. This is up from 46 percent in 2010/11, mainly because the processing of cane into sugar brought better margins than those realized from converting cane into ethanol. Sugar production is also expected to fall in **Argentina,** where frost hampered cane production, while it should remain at about last year's level in **Colombia**, the second largest sugar producer in the region. In *Central America*, preliminary forecasts indicate production in **Mexico** will remain unchanged from 2010/11, but high sugar prices could encourage producers to increase the use of fertilizer,

Figure 47. Sugar production by major producing countries

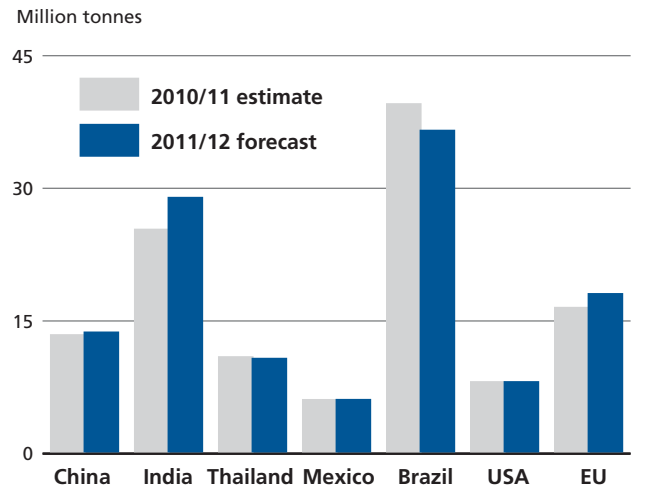
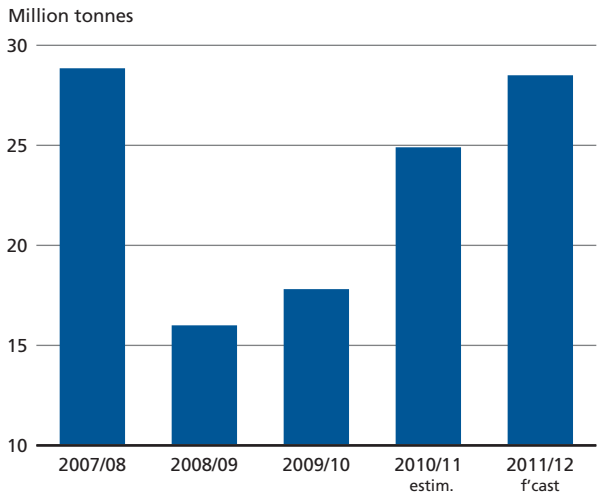


Figure 48. Sugar production in India



which could eventually result in an increase in output. In **Guatemala**, rising domestic prices, driven by buoyant internal demand, should support a sectoral expansion, while a series of policy measures, including higher cane prices, may boost output in **Cuba**.

Sugar production in *Africa* is projected to rise on the back of largely favourable weather conditions. In **South Africa**, the largest sugar producer in the region, production is forecast to increase moderately in 2011/12, as opposed to last season when a major drought curtailed sugarcane harvest. Gains are foreseen in **Kenya** and **Swaziland**, amid expectation of better weather conditions, while in **Mozambique** a continuous expansion in planted cane area and the use of high yielding varieties should boost output. Sugar output in **Egypt** and **the Sudan** is also expected to increase compared with last year. In *Asia,* sugar output is expected to increase over the 2011/12 marketing season, mostly driven by strong growth in **India**. Record sugar-cane prices in 2009 encouraged farmers to plant additional areas to sugar cane and boost input use. Being a perennial crop, the bulk of the cane harvest should be realized this season. Early estimates indicate that 2011/12 sugar output will decline by 1.7 percent in **Thailand** where adverse weather conditions and floods threaten cane yields. However, these estimates may be revised, depending on the extent of the damage. An increase in production is expected in **China** for 2011/12 as a result of a 10 percent increase in beet-planted area and a 5 percent increase in the sugar-cane-planted area of the three main sugar producing regions. Financial assistance as well as subsidized inputs provided by sugar mills to farmers were major contributing factors to area expansion. In **Pakistan**, estimates for sugar production in 2011/12 point to a reduction as famers have substituted sunflower and cotton for lower priced sugar cane. Output in 2011/12 is set to increase in **Indonesia** and **Japan** and to remain stagnant in **Turkey**.

In *Europe*, the latest estimates for the **EU** indicate strong gains in sugar production, largely due to an expansion in beet area and improvements in yields at both farm and mill level. Early field tests on both sugar content and beet yields have shown increases above long-term average. Propelled by a significant surge in areas sown to beet, sugar output is expected to expand in the **Russian Federation**, a situation in contrast with last year when severe drought negatively impacted crop development. Gains are also anticipated in **Ukraine**, in line with higher beet area and favourable weather. In the *rest of the world*, production in the **United States** is forecast to remain at the level achieved in 2010/11, as the fall in beet sugar production is expected to be offset by growth in cane sugar output. In **Australia**, sugar production is set to rise in 2011/12, spurred by high domestic prices over the past three years which led to a sharp increase in sugar-cane area.

UTILIZATION

World sugar consumption to increase, but still below long-term trend

According to the latest FAO estimates, global sugar consumption is anticipated to reach 166.6 million tonnes in 2011/12, which is 2.5 million tonnes, or 1.5 percent, more than in 2010/11. Increased supply availability and

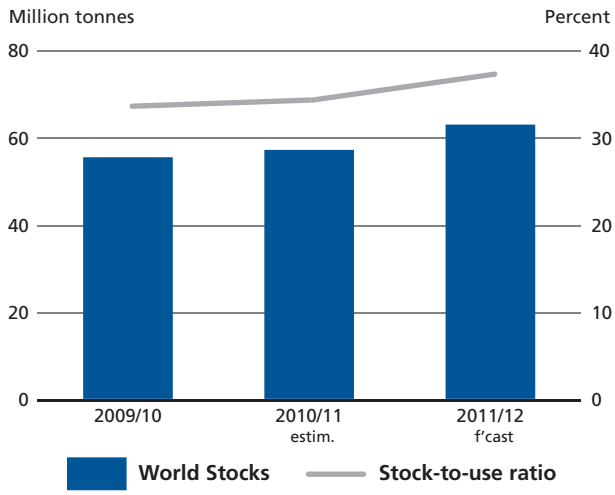
lower prices are expected to support larger sugar intake than the previous season. In 2010/11, high domestic sugar wholesale prices in virtually all regions curtailed demand. In China, for example, high sugar prices prompted several food producers to substitute starch sweeteners for sugar. Many countries took steps to rein in the rise of domestic sugar prices, as part of broader measures to curb domestic food inflation. These measures included sugar stock releases, retail price controls and cuts in import tariffs, as well as quantitative export restraints and/or high export taxes. Under current prospects, world per capita sugar consumption will remain steady at 23.8 kg in 2011/12. Aggregate sugar intake in developing countries is set to expand by 1.8 million tonnes to 118 million tonnes, or 71.0 percent of global consumption. In the generally more mature markets of developed countries, consumption is to increase by 1.6 percent, or 29 percent of the world total. However, lower global economic growth than currently forecast for 2011/12 could dampen prospects for demand expansion, as manufacturing and food preparation sectors, including the beverage industries, which constitute the bulk of total sugar consumption, are relatively sensitive to changes in income.

TRADE

World trade to contract as import demand declines

Latest FAO forecasts of world sugar imports for 2011/12 (October/September) stand at about 47.5 million tonnes, about 6 percent less than in the previous season. This reflects declining import demand from major importing countries, which are anticipated to harvest good crops. However, forecasts at this early stage of the season remain uncertain. After being the main driver of growth in world trade in 2009/10, **India** imported about 1 million tonnes in 2010/11, down by 83 percent from 2009/10 and, because of large production expected for the new season, the country is not anticipated to require any import in 2011/12. However, despite the absence of India from the market, Asia's import growth is likely to remain steady, led by increases in population and income. Purchases by **Indonesia** are expected to rise by 10 percent, especially as recent expansions in its refining capacity should strengthen its position as one of the major import destinations for raw sugar in Asia. Indonesia is expected to import most of its sugar from Thailand because of freight advantage and quality that meets the Government's imposed standards. Shipments are also expected to rise in **China**, sustained by strong domestic demand and the need to replenish state reserves, after large amounts were released last year to

Figure 49. Sugar closing stocks and stock-to-use ratio



curb rising domestic sugar prices. In *Europe*, shipments to the **EU** are also set to decline on the back of higher domestic production. Over the 2010/11 season, tight supply conditions prompted the EU to take a series of measures, including the suspension of duties for CXL countries, and the conversion of 500 000 tonnes of out-of-quota sugar into quota sugar. Since the launching of various reforms in the sugar subsector in 2006, the EU has turned from being a net sugar exporter to the world's largest importer of sugar.

Deliveries to the **Russian Federation**, once the world's largest importer of sugar, also are expected to decline significantly, in response to increased beet production. Imports will continue to be driven by strong growth in the food manufacturing sector, with the bulk of the sugar purchases originating in Brazil. In the *rest of the world*, deliveries to the **United States** are forecast to remain similar to the previous season, with about 1.38 million tonnes shipped under TRQ. Additional imports may be needed in the course of the season to rebuild reserves. Total imports by countries in *Africa* are expected to decline, as improving domestic supplies displace imports.

Despite global sugar production gains, export availabilities are expected to decline, reflecting lower output in Brazil, the world's largest exporter, strong domestic demand in exporting countries and the need for several producers to rebuild stocks that were used extensively during the past two seasons. **Brazil**, is now expected to ship about 22.1 million tonnes, down about 11 percent from 2010/2011, but still accounting for slightly less than half of global export. Sales from **Thailand**, the world's second largest sugar exporter, are expected to increase on the back of adequate supply availabilities (production and stocks). Most of the

sugar will be shipped to neighbouring countries, including Malaysia and the Republic of Korea, but also to the Russian Federation. Thailand is also set to fulfil the United States TRQ of about 15 000 tonnes (raw value) and could meet additional quota quantities. However, if the impact of the recent floods that affected sugar-cane areas proves to be more than anticipated, export estimates will have to be revised down accordingly. Exports from **Australia**, the world's third largest supplier, are likely to rise from their 2010/11 levels, as its exportable surplus will expand given greater production. Deliveries by **South Africa** are expected to decrease, and remain below long-term trend. The bulk of the shipments will be supplied to the Southern Africa Customs Union (SACU) market. Exports by **Guatemala** are foreseen to be sustained by greater availabilities and competitive pricing. Sugar has become the biggest foreign exchange earner for Guatemala, with Mexico and the United States representing the major export destinations. Similarly, sales by **Cuba** are set to increase, following greater supply availability. With recently announced measures to rehabilitate the sugar subsector, the country, once the world's largest exporter, plans to turn the sugar industry into a sustainable source of foreign currency.

Table 19. World meat market at a glance

	2009	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes			%
WORLD BALANCE				
Production	**283.6**	**290.8**	**294.7**	**1.3**
Bovine meat	65.0	65.0	64.6	-0.5
Poultry meat	93.6	98.1	101.1	3.1
Pigmeat	106.3	109.2	110.2	0.9
Ovine meat	12.9	13.0	13.0	-0.1
Trade	**25.2**	**26.5**	**27.4**	**3.6**
Bovine meat	7.2	7.6	7.6	0.9
Poultry meat	11.1	11.6	12.1	3.7
Pigmeat	5.8	6.1	6.6	7.9
Ovine meat	0.9	0.8	0.8	-2.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	41.4	42.0	42.1	0.1
Developed (kg/year)	78.4	78.6	78.3	-0.4
Developing (kg/year)	31.1	31.9	32.2	0.8

FAO MEAT PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010
				%
	133	152	177	18.0

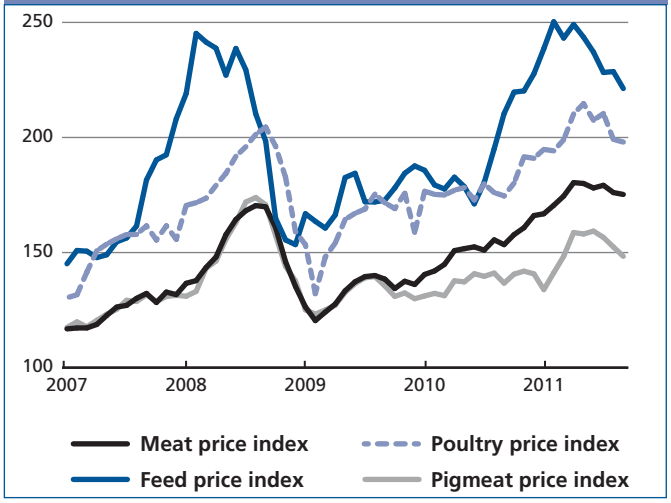
MEAT AND MEAT PRODUCTS

INTERNATIONAL PRICES

Meat prices ease in recent months but remain at historically high levels

High feed prices, adverse weather, disease outbreaks and livestock herd rebuilding have kept meat prices at record levels in 2011. In April, the FAO meat price index rose to 180 points, the highest value registered in its more than 20-year existence. Since April, prices have eased, and as of October 2011, the FAO meat price index was down to 177. However, despite the softening, meat prices remain 12 percent above October 2010. Price gains have points the highest for sheep meat, up 35 percent, followed by poultry and beef, up 16 and 12 percent respectively. The price strength principally reflects robust import demand, particularly from Asian markets and the Russian Federation, which have propelled world meat trade up by 3.6 percent, to 27.4 million tonnes.

Figure 50. Evolution of meat/feed index prices (2002-2004=1)



BOVINE MEAT

Declining cattle inventories in major exporting countries portend a continuation of high beef prices

Constrained by low cattle inventories, drought and animal restocking initiatives, global bovine meat production is expected down marginally to 65 million tonnes in 2011. Output by Brazil and the United States, which together supply one-third of global beef production and exports, is expected to contract. In the United States, beef output is declining despite increased herd liquidation, due to an historic drought that has affected major grazing areas, with the lack of precipitation inducing a reduction in cow herds

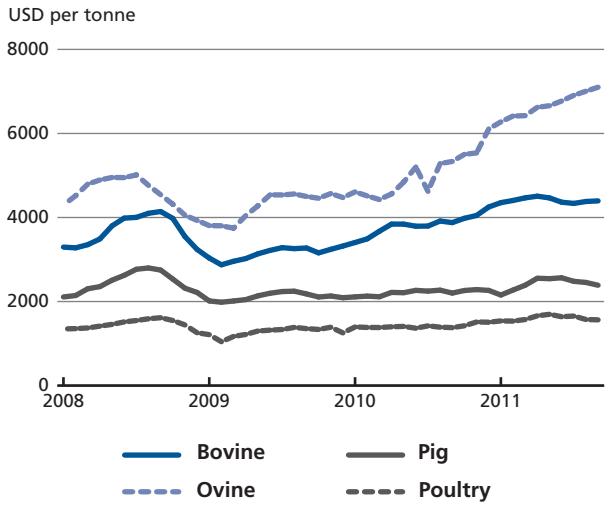
to the lowest level since 1950. As a result, United States beef supplies are likely to be limited in the next few years, a prospect also expected in drought-affected **Mexico**. Drought conditions also persist in the Horn of Africa, home to Africa's largest cattle herds, with a progressive deterioration of forage in **Ethiopia, Kenya** and **Somalia** leading to poor animal conditions and high mortality rates.

In South America, low cattle inventories are undermining prospects for output, now set to decline for the second consecutive year. In **Brazil,** production is being hindered by limited availability of quality animals, competition in domestic markets from cheaper alternative meats and slow exports. In neighbouring **Argentina** and **Uruguay**, cattle numbers have declined to their lowest in a decade, with Argentina's downfall linked to government slaughter weight and export restrictions which, despite high prices, have eroded both production and investment in the sector. Early 2011 droughts in **Uruguay** and high live cattle exports are resulting in reduced slaughter numbers and output in the country. **Paraguay**, previously expected to benefit from its newly acquired OIE disease-free status, is reeling from an outbreak of foot-and-mouth disease (FMD) in mid-September, which is expected to cut slaughter and depress exports by 16 percent. Canada's cattle numbers are the lowest since 1994 and herd rebuilding is leading to a nearly 10 percent output decline in 2011. Industry prospects are also pressured by a 40 percent fall in live cattle exports, following the introduction of a country-of-origin meat-labelling law (COOL) by the United States, a policy currently in dispute in the World Trade Organization (WTO).

In Europe, dairy herd restructuring in the **EU** and the **Russian Federation**, and the EU's policy reform, which has progressively reduced support to the beef sector, are resulting in falling cattle numbers and constraining production gains. Conversely in **Kazakhstan**, herds and output are expanding, sustained by government subsidies on breeding animals and feed, as well as favourable credit packages for producers.

In Asia, **India**, now the fifth largest beef producing country, has benefited from adequate supplies of cattle for slaughter, partly due to development of the country's dairy sector which has resulted in a growing number of male animals. However elsewhere in the region, high feed prices and policies continue to put downward pressure on output. For instance, in the **Republic of Korea**, the Government's calf price stabilization, introduced after the country's worst ever outbreak of FMD, will encourage producers to keep animals for restocking, limiting the potential for output gains. In **Indonesia**, an animal welfare-related ban, imposed by Australia on live cattle exports to that market,

Figure 51. Trade-weighted international prices



is likely to result in lower cattle slaughter numbers and beef production. Cattle losses associated with natural disasters in both **Pakistan** (2010, 2011) and **Japan** (2011) are estimated to have depressed beef output in those two countries, while high feed prices are curtailing output in **China**. In Oceania, beef output is forecast to grow in **Australia**, after several years of herd rebuilding.

Import demand grows despite higher prices

Reduced supplies in traditional importing markets, such as **Indonesia, Japan** and the **Russian Federation**, are pushing up imports in 2011 to 7.6 million tonnes. Accounting for half of global imports, countries in Asia are expected to raise their beef imports by nearly 10 percent to 3.5 million tonnes, with higher deliveries to **Hong Kong SAR, Malaysia, the Philippines** and **the Republic of Korea**. In **Japan**, the finding of radioactive contamination in cattle that consumed rice straw in the area near the site of the nuclear accident has stimulated demand for imported beef. A lifting of **Viet Nam's** eight-year ban on Canadian cattle and beef is supporting imports, which have risen 100-fold over the past five years. Elsewhere, a near doubling of beef imports is expected in **Turkey** despite a mid-year reversal of previously reduced duties for beef cuts and feeder and slaughter cattle. The Australian ban on live cattle exports to **Indonesia** will likely stimulate a shift of import demand towards beef in this country. Meanwhile, in the **Chinese Province of Taiwan,** regulations imposing testing on ractopamine, an authorized drug in many countries, are slowing deliveries. Shipments to **Egypt**, a major market in the Middle East, are forecast to decline, reflecting disruption of trade due to political unrest earlier this year. Regional imports by Central America and the Caribbean are down for the third successive year,

as demand for imported products in **Mexico** was reduced when a drought-induced increase in slaughtering led to increased domestic availability.

Benefiting from favourable exchange rates and a re-opening of markets previously closed due to concerns over bovine spongiform encephalopathy (BSE), the **United States** beef exports are increasing at a rapid pace. Under the expected 20 percent jump in shipments to 1.3 million tonnes, the country would emerge as the second largest world beef exporter after Brazil. Although still standing as the world's largest beef importer, the United States has moved into an unprecedented net export situation. Conversely, battling unfavourable exchange rates and limited cattle availabilities, shipments from South American and Canadian suppliers are set to slip by 10 and 20 percent respectively, reflecting smaller deliveries from **Brazil** as well as **Argentina**, **Paraguay** and **Uruguay**. In Europe, euro weakness is facilitating beef sales from the **EU** to the Russian Federation and to many Middle Eastern markets, in particular Turkey. Conversely, the strength of **Australian** and **New Zealand** currencies is expected to depress exports from the two countries. This would allow **India** to move up, becoming the fourth largest exporter of beef, as strong demand for low-priced buffalo beef in Southeast Asian countries, such as Malaysia and the Philippines, fosters an increase of bovine meat, including buffalo, sales abroad.

PIG MEAT

The pig sector struggles to recover in the wake of disease outbreaks

Slow growth in Asia, which hosts approximately 65 percent of the global pig population, is constraining global pig meat production to 110 million tonnes, only 1 percent higher than in 2010. Disease outbreaks in late 2010 decimated pig herds in both **China** and the **Republic of Korea**, with the resulting shortages pushing up national pig prices in both countries by 60 percent over the past 12 months. In **China**, production is estimated around 52 million tonnes, 2 percent more than in 2010, but the smallest expansion since 2007. The production slowdown prompted the Government to resume sow subsidies for large producers and to release pork stocks to bring down food inflation. The impact of diseases is anticipated to be even stronger in the **Republic of Korea**, where increased farrowings are only partially replacing the loss of one-third of the national herd and production is forecast to contract by about 25 percent. In **Japan**, lower piglet births in the provinces affected by nuclear fallout have combined with a 13-percent reduction in pig farms over the past three years, depressing output by an estimated 7 percent.

In South America, a 20 percent decline of hog prices in **Brazil** and the liquidation of some producer operations following the imposition of export restrictions are limiting regional output gains to 1 percent. However, in a region characterized by high beef consumption, the high domestic beef prices prevailing in most of the region are offering an opportunity for an expansion of consumer demand for pork, especially in countries such as **Argentina**, **Chile, Colombia** and **Uruguay**.

In the developed countries, pig meat production is currently forecast to stagnate around 41.3 million tonnes overall, constrained by high feed prices. In **Canada** and the **United States**, a surge of sow productivity, e.g. over ten piglets per litter, is behind an expected 1 percent increase in output in both countries, with further gains likely next year, especially if feed prices continue to ease. In the **EU**, the sector is expected to stagnate in 2011, reflecting shrinking profitability. Rising production costs following the implementation of new animal welfare requirements and high feed prices are prompting less efficient commercial farms to liquidate their hog inventories. In the **Russian Federation**, new support packages are fostering expanding investment in the sector and output.

Double-digit growth in Asian imports strengthens pigmeat trade prospects

Strong world import demand is anticipated to boost pigmeat trade by 8 percent in 2011, to 6.6 million tonnes. In the wake of herd decimation following last year's FMD outbreak, deliveries to the **Republic of Korea** are forecast to rise by 57 percent. In an effort to reduce food price inflation, pork imports by **China** are also anticipated to surge to record levels this year. Strong demand by **Hong Kong SAR, Japan, Singapore** and **Viet Nam** is supporting further expansion of trade. Much of the increase is expected to be met by larger exports from the **EU** and the **United States**. In the United States, shipments are running at a record pace, which may translate into a record 17 percent gain. Exporters in the country are benefiting from the resolution of a trucking dispute with Mexico and reduced competition in the Russian Federation, following the veterinary restrictions imposed by the country on pigmeat from Brazil. Those same restraints are also favouring an expansion of exports from the **EU**, which are also supported by the release of private stocks in the wake of last year's dioxine crisis. By contrast, deliveries from **Brazil** are now expected to decline somewhat, a reflection of reduced access to the Russian market.

POULTRY MEAT

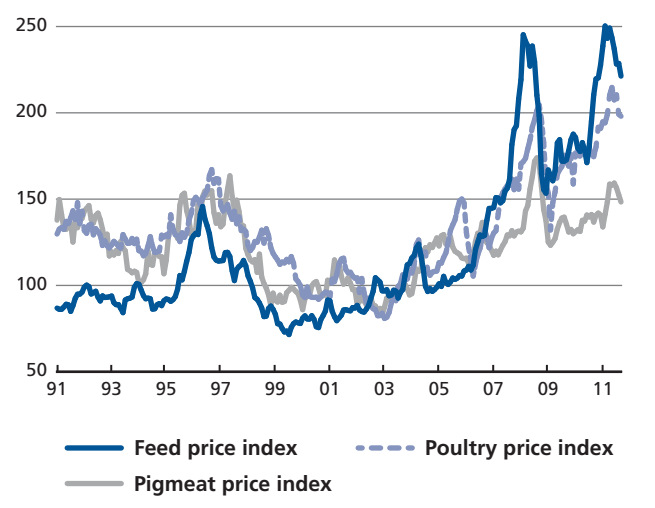
High feed prices halve production gains

Global poultry production is on track to exceed 101 million tonnes in 2011, which would raise poultry's contribution to global meat supplies by half a point to 34 percent. However, reduced profitability due to high feed prices and disease outbreaks may limit the global output gain to only 3 percent, compared with nearly 5 percent in 2010. In the **United States**, the supplier of one-fifth of global output, high feed prices and more difficult access to the Chinese market following the imposition of anti-dumping tariffs have contributed greatly to a 30 percent reduction in estimated returns, and has resulted in some company closures. As a result, production is forecast to grow by only 1 percent to 19.9 million tonnes, down from over 3 percent last year. A stronger, 2 percent, expansion is anticipated in the **EU**, as robust export demand is supporting prices and output, compensating for the rise in production costs stemming from tighter animal welfare regulations. In the **Russian Federation**, government interventions to keep feed costs low, combined with restrictions on poultry imports, have stimulated production to grow at a double-digit rate. Similar measures are supporting investment and production in **Kazakhstan** and **Ukraine**.

In Asia, the high price of pigmeat relative to poultry is fostering a shift of consumers towards poultry. However, the sector's growth in Asia continues to be challenged by a resurgence of the Bird Influenza Virus (H5N1). As a result, output in the region, which accounts for one-third of global production, is expanding at 3.5 percent, well below recent trends. The slowdown is largely caused by low or negative growth in countries where H5N1 is still firmly entrenched, such as **Bangladesh, Indonesia** and **Viet Nam**. In other endemic countries, such as **China** and **India**, but also **Thailand** where the disease has been controlled, an expansion of larger and more biosecure operations is supporting an increase of output but at a slower rate. Non-endemic **Malaysia**, on the other hand, has facilitated an expansion of poultry output by raising the retail ceiling price for poultry. While feed and food safety concerns in **Japan** are depressing output, the circulation of a mutant strain of the H5N1 virus in countries that had been virus-free for several years is raising output and human health concerns in **Mongolia** and **Nepal** but also in non-Asian countries such as **Bulgaria, Israel** and **Romania**.

South America is expected to witness the strongest output gains of all regions. Tight supplies and rising prices of beef in the region are stimulating demand for poultry, which has translated into a nearly 5 percent jump in output, to 18 million tonnes. In **Argentina**, the provision of subsidized loans as well as strong export growth are pushing output up by 10 percent. Poultry production also looks set to expand in **Brazil, Chile, Colombia** and **Peru**. The regional exception is **Venezuela** where the imposition of controls on consumer prices is deterring investment in the sector.

Figure 52. Evolution of poultry and pigmeat/feed index prices (2002-2004=1)



Poultry trade growth slows in the context of trade restriction and disputes

Although trade in poultry meat is forecast to increase by 4 percent to over 12 million tonnes in 2011, the international environment for poultry continues to be characterized by the imposition of trade restricting measures and escalating disputes. While **Canada** and **Mexico** are expected to increase imports in 2011, reductions in the Russian Federation tariff rate quotas on poultry are undermining global poultry trade prospects. The **Russian Federation**, the world's largest poultry importer until 2008, is anticipated to cut its purchases by 30 percent compared with 2010, to only one-third the level of 2008. Similarly, shipments to the **Ukraine** have fallen by 70 percent from its 2010 level. In Asia, growing imports by **Japan**, **the Philippines** and **Viet Nam** are more than compensating for a three-year decline in imports by **China**, pressured down by anti-dumping and countervailing duties on shipments from the United States, which filed a complaint in September at the WTO.

Unlike the **United Sates**, where poultry exports are expected to decline for the third consecutive year amid more difficult access to traditional markets, shipments from **Brazil** and the **EU** are benefitting from strong demand for poultry meat in **Hong Kong SAR and Saudi Arabia** as

well as many countries in Africa, a region accounting for only 10 percent of global trade, but which is registering the fastest import growth. Strong import demand stems from **Angola, Benin, Egypt, Namibia** and especially, **South Africa,** where a currency appreciation has stimulated purchases despite the imposition of anti-dumping duties on poultry from the United States. A strong pace of imports is also reported by **Iraq,** the **Islamic Republic of Iran** and **Kuwait**, sourced from South American exporters, in particular Argentina, Brazil and Chile. On the other hand, the **EU** is expanding its net export position, amid increased poultry meat availabilities, associated with the restructuring of the sector facing stricter animal welfare regulations, and the maintenance of quota restrictions on imports.

OVINE MEAT

Record sheepmeat prices attributed to historically low output in developed countries

A five-year stagnation of global sheepmeat production continues in 2011 on the heels of declining sheep flocks in Oceania, Europe and North America, and record high drought-induced livestock mortalities in the Horn of Africa. In **China**, home to nearly one-third of all small ruminants, output growth is slowing as authorities have restricted many sheep farming operations in an attempt to avoid erosion and desertification and preserve the environment. In Oceania, which supplies more than two-thirds of global exports, output is expected to fall by 8 percent, as harsh weather affected lambing in **New Zealand**, while producers in **Australia** are holding back lambs for restocking, in response to near record prices. In Africa, two consecutive seasons of significantly below average rainfall in the Horn of Africa have resulted in a depletion of grazing resources in **Ethiopia, Kenya** and **Somalia** and significant livestock mortality.

In **Ethiopia**, mortality rates in drought-affected areas are estimated at about 60 percent in cattle, 40 percent in sheep and 25–30 percent in goats. In the **Sudan**, sheep prices have risen threefold to record levels as domestic consumption remains strong and market shortages in the Middle East, a region heavily dependent on live sheep imports from Australia and the Horn of Africa, are stimulating live animal shipments. In Asia, monsoon flooding in the southern parts of **Pakistan**, the fourth largest producer of sheep meat and a major exporter to the Middle East, has put millions of animals at risk, stranded by flooding and facing parasite infections, disease and feed shortages.

Higher prices and animal shortages lead to a second year of trade declines

While exports from non-traditional suppliers, such as **Argentina, India** and the **Islamic Republic of Iran**, are increasing, reduced exportable supplies in **Australia** and **New Zealand** are lowering global exports in 2011 to 824 000 tonnes, down 3 percent from 2010. Reduced live animal deliveries from the drought-affected Horn of Africa are weighing on markets and contributing to price increases of more than 80 percent in Middle Eastern countries. In many of the heavily import-dependent countries in the Middle East, low availability of both sheep meat and live animals has translated into high prices, and induced policy responses ranging from subsidizing sheep prices in **Qatar** and fixing prices in the **United Arab Emirates** to subsidizing fodder in **Saudi Arabia**. In other markets, high world prices are limiting deliveries to **China** while a decline in **EU** imports is being compensated by higher deliveries to the **United States,** where sheep inventory levels have fallen to 100-year low levels and prices have increased by 70 percent, likely in response to growing demand for sheep and goat meat in the face of changing demographics.

Table 20. Major Meat Market Policy Developments: January to October 2011

Country	Product	Date	Policy Instrument	Description
Argentina	Beef	Jun-11	Price control	Maximum beef wholesale and retail prices increased by about 30 percent after three years without change.
Australia	Live cattle	Jun-11	Export ban	Export ban on live cattle to Indonesia, consequently lifted at the beginning of July, imposing more stringent regulations regarding animal welfare, full traceability etc.
	Live cattle	Aug-11	Export assistance measures	Assistance Some of some USD 73 million (AUD 70 million) provided to cattle producers affected by the livestock export trade suspension. In addition, interest rate on new loans subsidized up to USD 314,000 (AUD 300,000) for two years to stakeholders involved in the live export trade.
Belarus	Pork, poultry	May-11	Elimination of import ban	Import ban lifted for pork, poultry and ready meat products containing pork from Germany (imposed in early January in connection with the dioxin incident).
China	Poultry	Apr-11	Import ban	Import ban on poultry products from the Netherlands after H7N1 bird flu virus outbreak on 22 March.
	Beef, pork, sheep and goat meat	Apr-11	Import restrictions	As of April 1, all imports of beef, pork, sheep and goat meat, as well as red meat offal is subject to import reporting to the country's Chamber of Commerce for Import & Export of Foodstuffs, Native Produce & Animal By-Products.
	Live Pigs	Jun-11	Subsidies	Subsidy of 400 million USD (2.5 billion RMB) for pig breeding resumed to prevent supply shocks and price surges as seen in first half of the year.
	Live Pigs	Jul-11	Subsidies	Productive sow subsidies reintroduced at 100 yuan (USD 15.60) per animal (subsidy had been suspended in mid-2010).
Switzerland-Colombia	Dried meat	Jul-11	Free trade agreement	Free trade agreement (FTA) in force from July 1 grants Switzerland duty-free access for dried meat.
Canada-Colombia	Beef, pork	Aug-11	Free trade agreement	FTA in force from August 15: Colombian import tariffs on Canadian beef reduced to zero over a 12-year period with set amounts of tariff rate duty free quotas growing over that period; duties on Canadian pork phased out over 13 years; set amounts of tariff rate quotas start at 20 percent duty and phased out to zero within the tariff rate quota in five years.
EU	Beef	Mar/Jul/Aug 2011	Tariff-free import quota extended	Tariff-free quota for high quality beef imports extended to Canada (March 2011), New Zealand (July 2011) and Uruguay (August 2011).
	Pig meat	Feb-11	State market intervention	Introduction of a Private Storage Aid (PSA) programme for European pig meat on Feb 1 in response to the German dioxin incident (programme terminated on Feb 23).
	Live Chickens	Jun-11	Animal welfare regulations	Regulations tightened for the protection of chickens kept for meat production.
EU - Korea, Rep. Of	Pork, poultry	Jul-11	Free Trade agreement	FTA in force as of 1 July 2011 with import tariffs to be eliminated by the end of the transitional periods on most agricultural products, including pork and poultry products.
Fiji	Lamb	Sep-11	Price control removed	Price controls removed for imported lamb.
India	Live animals and livestock products	Jul-11	Import ban extended	Extension of the ban on imports of specified live animals and livestock products from all countries reporting highly pathogenic avian influenza (HPAI) and low pathogenic avian influenza (LPAI), for an unspecified period.

Country	Product	Date	Policy Instrument	Description
Korea, Rep. of	Livestock	May-11	Animal welfare regulations	Introduction of measures to strengthen the country's livestock disease controls including farm registration, minimum space requirements per animal, increased training, stronger foot-and-mouth disease (FMD) standard operating procedures (SOPs), and cost sharing for vaccination expenses.
	Poultry	May-11	Import quota	A 50 000 metric tonne zero-duty TRQ (Tariff-rate quota) for frozen chicken meat was announced in May and filled by July.
	Live pigs	Jun-11	Import duty	Tariff-free import of 31,000 sows (previously tariff stood at 18%) for the second half of 2011.
	Pork, beef	Jul-11	Price support measures	Price support measures initiated to help lower fresh/chilled belly meat prices, through: 1 initiating incentives for contracting under the emergency government purchase of 10 000 metric tonnes; 2.cutting domestic selling price on the government-purchased meat by about 10 percent; 3.supporting payment to offset air freight expenses for imports outside the emergency government purchase; and 4.requesting consumers to eat other pork cuts and local beef. These incentives are effective until 20 August.
	Pork	Aug-11	Import duty	Tariffs eliminated on all imports of chilled pork for food processing through September 30 replacing import duty reductions and renewals/extensions of duty-free import quotas initiated earlier in 2011
Malaysia	Beef	Jan-11	Elimination of import ban	Ban eliminated on imports of beef and beef products from the EU (introduced in 2001).
	Poultry	Jul-11	Price control	Ceiling price for standard chicken meat set at RM6.35 per kg during Ramadan and Aidilfitri festivities.
	Live animals	Jul-11	Import ban	Imports of live cattle and other livestock from Australia banned following outbreak of hendra, a bat-borne virus.
	Live animals	Aug-11	Import ban lifted	Import ban on live cattle and other livestock from Australia lifted (except for horses).
New Zealand	Live animals	Sep-11	Animal welfare regulations	New welfare code establishes minimum standards of animal welfare and best practices for everyone involved in transporting animals in New Zealand.
Philippines	Beef	Jan-11	Elimination of import ban	Last BSE (Bovine spongiform encephalopathy) ban on European beef imports lifted (ban introduced in 2000).
Russian Federation	Beef, poultry, pork	Jun-11	Import ban	Import bans imposed on processed meat from three Brazilian states (Mato Grosso, Parana, Rio Grande do Sul) because sanitary conditions failed to meet required standard.
	Pork, poultry	Jul-11	Import quota reduction	2012 pork and poultry tariff quota quantities reduced: pork (320 000 metric tonnes), pork trimmings (30 000 metric tonnes), poultry boneless (80 000 metric tonnes), poultry bone-in parts (250 000 metric tonnes). Poultry and pork imports within quota will be subject to a 15% customs duty and a 75% excess quota customs duty.
South Africa	Meat and live animals	Feb-11	Export ban	Ban on the export of meat and live animals due to a FMD outbreak in eastern South Africa. The ban also affects Namibia and Botswana, who export their meat through South African ports.
	Red meat	Apr-11	Elimination of export ban	Export ban on red meat lifted; live animals still under the export ban.
	Poultry	Apr-11	Export ban	Poultry meat exports suspended following an outbreak of avian flu at ostrich farms in Western Cape.
	Pork	Jul-11	Elimination of import ban	South African market reopened for Brazilian pork. South Africa banned imports of beef and pork from the whole of Brazil in 2005 due to an FMD outbreak in cattle in Mato Grosso do Sul. Beef imports ban lifted in 2009.

Country	Product	Date	Policy Instrument	Description
Taiwan	Beef	Jan-11	Food safety measures	New residue testing measures implemented for ractopamine (a feed additive) in beef.
Thailand	Poultry, pork	Jul-11	Price control	Chicken and pork reference prices regulated.
	Live pigs, pork	Aug-11	Price control	Further measures to control escalating hog and pork prices endorsed (including a six-month export restriction from August 6, 2011 to February 5, 2012).
Turkey	Beef	Mar-11	Import duty	Customs tax on carcass meat increased from 30% to 45%.
	Beef	May-11	Import duty	Customs tax on carcass meat increased from 45% to 60%.
	Beef	Jul-11	Import duty	Customs tax on carcass meat increased from 60% to 75%.
Ukraine	Live pigs, pork	Mar-11	Import ban	Ban on imports of pigs and pork meat from South, Central and Privolzhkiya Federal District of Russia.
	Meat	Jun-11	Import ban	Ban on import of Brazilian meat.
	Poultry	Jul-11	Import licensing	Import licensing required for poultry, poultry fat and lard imports.
	Pork	Sep-11	Import ban lifted	Pork import ban from Azerbaijan lifted.
	Meat	Oct-11	Import ban	Ban on meat imports from Nicaragua, Uruguay and Israel due to disease outbreaks in those countries.
USA	Pig meat	Mar-11	Import duty	Removal of the Mexican (retaliatory) tariffs on US pig meat exports after settlement of the trucking dispute between US and Mexico.
	Poultry	Sep-11	WTO complaint filed	Complaint filed with WTO against China on anti-dumping and countervailing duties on shipments from the US (imposed by China in Sept 2010).
USA - Korea, Rep. of, Colombia, Panama	Beef, pork	Oct-11	Free Trade agreement	Three FTAs (South Korea, Colombia and Panama) approved by US Congress. The greatest potential for the US livestock industry comes from the South Korean trade pact as it a major buyer of US pork and beef. The agreement calls for a 10-year phase out of South Korea's pork tariffs and a 15-year phase out of their beef tariffs.
Vietnam	Live animals	Aug-11	Import ban lifted	8-year ban on Canadian live cattle, sheep and goat imports lifted; full access for Canadian beef exports to Vietnam were granted in July 2010.
Zimbabwe	Poultry	Apr-11	Import ban	Import ban on all poultry imports from South Africa following an outbreak of bird flu in an ostrich farm.

MILK AND MILK PRODUCTS

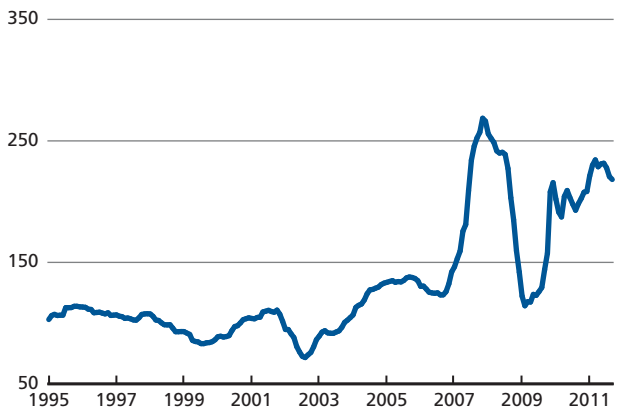
PRICES

International dairy product prices fall back from first quarter highs

Since reaching a peak in the first quarter of 2011, the FAO international dairy products price index (2002–2004=100) has trended downwards, dropping by 13 percent between March and October to stand at 204. The product most affected was whole milk powder (WMP), although skim milk powder (SMP) and butter prices also fell. WMP dropped by USD 1 100 per tonne, or 24 percent, from its March peak. Since March, butter has declined by USD 800 per tonne, or 17 percent, SMP by USD 500 per tonne, or 13 percent and cheddar cheese prices by USD 400 or 9 percent. The price slide of dairy commodities overall reflects a rise in export availability and a fall in the value of the Euro in relation to the US Dollar since July.

After an extended period of favourable international prices, publically financed inventories of dairy commodities are at minimal levels in the EU and the United States. Consequently, international dairy quotations for the coming year will be particularly sensitive to climatic conditions in relation to pasture growth and availability and price of fodder and feed, and to their effect on milk production.

Figure 53. 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.

Table 21. World dairy market at a glance

	2009	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes, milk equiv.			%
WORLD BALANCE				
Total milk production	**701.4**	**713.6**	**727.6**	**2.0**
Total trade	**44.3**	**47.0**	**49.5**	**5.4**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	101.7	102.3	103.1	0.8
Developed (kg/year)	233.9	233.4	233.7	0.1
Developing (kg/year)	66.7	68.0	69.4	2.1
Trade share of prod. (%)	6.3	6.6	6.8	3.4

FAO DAIRY PRICE INDEX (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	142	200	224	12.8

PRODUCTION

World dairy production forecast to grow by 2 percent in 2011, supported by gains in Asia

World milk production in 2011 is forecast to grow by 2 percent to 728 million tonnes. Much of the anticipated expansion is likely to accrue in *Asia*, where **India**, the world's largest milk producing country, is expected to witness an output rise of 5 million tonnes to 121.7 million tonnes. Rising domestic demand is the main engine stimulating growth in the country, as India is largely absent from the international market for dairy products. Substantial increases in production are also anticipated in **China** and **Turkey**, spurred by brisk consumer demand. The milk sector in China, recovering from the 2009 tainted-milk scandal, rebounded by 10 percent in 2010 and despite rising costs, is expected to grow a further 7 percent in 2011, a reflection of the consolidation of the industry. In contrast, **Japan** may experience a limited contraction, in part as a result of the aftermath of the earthquake which struck the country this year.

In *Africa*, milk output may stagnate or even contract this year, as feed costs have been rising and pasture conditions have deteriorated from last year's excellent conditions. The lingering drought in the Horn of Africa and the ensuing high cattle mortality rates are expected to depress production in **Ethiopia**, **Kenya** and **Somalia**. In the rest of the region, **Egypt** looks set to produce 6 million tonnes, little changed from 2010.

Rising incomes and strong international prices have favoured production growth in several countries in *Latin America and the Caribbean*. In most of South America, pasture conditions have been good so far this year and milk output has expanded in a number of countries, including **Argentina** and **Uruguay**, where it is on course to rise by 10 and 15 percent, respectively. In both cases, good returns

on the international market have led to a greater use of concentrated feed, further increasing milk per animal yields. Elsewhere in the region, most countries are on track to maintain or slightly increase production compared with the previous year. An exception is **Brazil**, the region's largest producer, where poor pasture conditions and high feed prices are expected to depress production by 2 percent.

In *North America*, milk production in the **United States** is forecast to rise to 89 million tonnes, partly as a result of dairy herd expansion in response to positive national and international demand. Production in **Canada** was stable at 8.3 million tonnes, within the limits set by the milk quota system.

In *Europe*, the **EU** is forecast to raise production by 1 percent to 156.4 million tonnes, as improved milk yields more than compensate for reduced cow numbers. While the sector remains subject to production limits, quotas are being raised by 1 percent a year in preparation for the system's abolition in 2015. In the **Russian Federation**, last year's drought induced a sharp contraction in the dairy herd, as severe feed shortages prompted producers to cull animals. Consequently, a second year of below average output is anticipated, with milk production expected to drop by 2 percent to 31.2 million tonnes. In neighbouring **Ukraine**, milk production has declined for a number of years and is expected to fall further in 2011. This trend reflects a movement out of dairying by former large collective farms, which has been only partly counterbalanced by a rise in family farms.

In *Oceania*, a prolonged period of high prices for dairy products on the international market and associated levels of profitability have stimulated milk production. In **New Zealand**, output during the 2010/11 season (June/May) was constrained by unusually wet weather, while in the current 2011/12 season, an increase in herd size combined with average weather is forecast to raise output by over a million tonnes to 17.5 million tonnes. In **Australia**, the ending of the prolonged drought has encouraged farmers to rebuild their dairy herds, but it will take a few years before they reach pre-drought levels. Nonetheless, milk production is expected to register a 3 percent increase in 2010/2011 (July/June), followed by more substantial growth in the subsequent season.

TRADE

Adequate supplies lead to a weakening of international prices

World trade of dairy products is expected to continue expanding during 2011, reflecting strong international demand, reaching 49.5 million tonnes of milk equivalent. However, good export availabilities and a fall in value of the euro against the US Dollar led to some price decline during the year, as exporters competed for sales. Purchases by Asian countries are anticipated to be moderately higher with import demand being maintained or increasing in **China**, **Indonesia**, the **Republic of Korea**, **the Philippines**, **Singapore** and **Thailand**. Elsewhere, imports by **Algeria** and **Egypt** are also expected to grow substantially. On the export side, most of the main trading countries are likely to record an increase in sales, especially **Argentina**, **Belarus, the EU**, **New Zealand** and the **United States**.

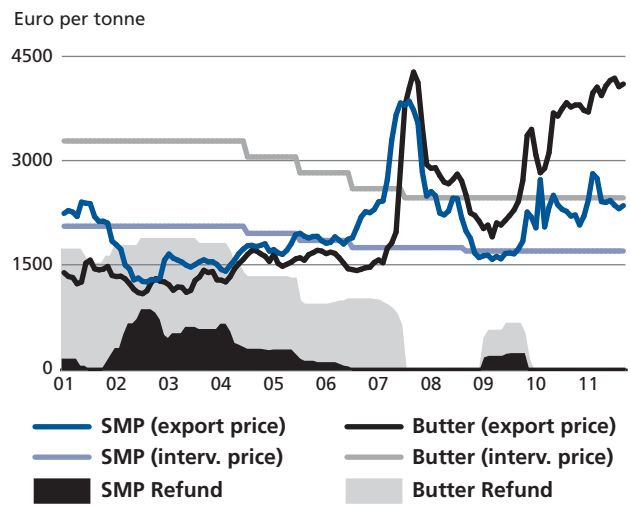
WHOLE MILK POWDER

WMP prices rose in the first months of the year, amid uncertainty about export supplies associated with low stocks and an extended period of very dry weather in Europe at the start of the production season. After reaching a high of USD 4 592 per tonne in March, prices fell to USD 3 475 per tonne by October. The decline accelerated during the second half of the year, when it became clearer that supplies would be adequate. World exports of WMP in 2011 are projected to be moderately higher than the previous year: at 2.2 million tonnes. Purchases rose with strong demand exhibited by the principal importers, **Algeria**, **Mexico** and **Venezuela**. For the exporters, **Argentina** and **New Zealand** will meet most of the additional sales associated with increased trade, as supply limitations and more profitable alternative uses are expected to curb exports from **Australia** and the **EU**.

SKIM MILK POWDER

SMP prices also declined during the second half of the year, although more moderately than those of WMP. From a peak of USD 4 000 per tonne in June, they dropped to USD 3 346 per tonne by October. World SMP exports are anticipated to rise for the fourth consecutive year and could reach 1 694 000 tonnes in 2011. Three-quarters of world exports are supplied by the **EU, New Zealand** and **the United States**. While all three are expected to increase shipments, the **EU** is anticipated to experience the largest gain, as the fall in value of the Euro against the US Dollar has opened up new opportunities for European traders. Furthermore, SMP exports play an important role in maintaining the EU milk market in balance, as overall internal demand is biased towards milk fat (for both butter and cheese production) rather than milk protein. Exports of SMP by the **United States** have grown substantially in recent

Figure 54. EU intervention prices, price and export refund for butter and skim milk powder



years as domestic production milk has been stimulated by favourable international prices. As a consequence, the United States is currently the second supplier of SMP to the world market. **Australia** and **New Zealand,** which are respectively ranked third and fourth, are also expected to see exports grow. On the import side, SMP is central to the milk processing industry in many countries and, as such, market demand is widely spread. The principal markets are **Algeria, China, Egypt, Indonesia, Malaysia, Mexico,** the **Philippines, Singapore** and **Thailand**. Demand is expected to remain firm in these markets, overall. In the first half of the year, import figures showed particularly strong growth in purchases by **Algeria** and **Mexico**.

BUTTER

Butter prices also weakened in the course of 2011. From a record of USD 4 883 per tonne in March, prices fell to USD 4 075 per tonne in October, similar to the level of decline of its co-product, SMP. Trade in butter is forecast to be marginally higher in 2011, to stand at 884 000 tonnes. This is a consequence of increased trade by **New Zealand** and the **United States** being largely counterbalanced by a fall in sales from **Australia** and the **EU**. In the case of the EU, lower profitability for butter has led to more emphasis on using milk for cheese production. EU domestic prices of butter are, in any event, currently higher than international levels, limiting potential for exports. Furthermore, intervention stocks, which have in the past supported exports, are exhausted. In contrast, exports from **New Zealand**, which now supplies close to 50 percent of the international butter market, are expected to increase by 8 000 tonnes, mainly as a result of meeting the requirements of its traditional customers. Exports by the **United States** also grew, reflecting the profitability of converting surplus domestic milk supplies into butter (and SMP) for external markets. Demand for butter imports comes principally from Southeast Asia and Middle East countries and the **Russian Federation** and is expected to remain firm.

CHEESE

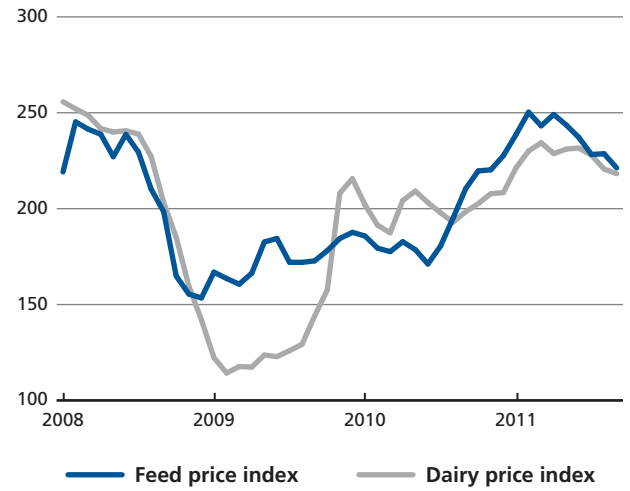
Among the dairy commodities, only **cheese** prices were stable during 2011, staying around the USD 4 400 per tonne mark throughout the year, easing only in October to USD 4 029. Trade in cheese is forecast to grow by 5.5 percent in 2011, to 2 336 000 tonnes, sustained by robust import demand. The main markets are high income or oil exporting countries such as **Algeria, Japan, Mexico,** the **Republic of Korea,** and the **Russian Federation**.

Table 22. Major exporters of dairy products

	2007-09 *Average*	2010 *prelim.*	2011 *f'cast*
	thousand tonnes		
WHOLE MILK POWDER			
World	**1 954**	**2 141**	**2 165**
New Zealand	701	949	1005
EU*	437	444	422
Argentina	117	128	180
Australia	130	115	113
SKIM MILK POWDER			
World	**1 223**	**1 482**	**1 694**
EU*	203	378	484
United States	299	384	415
New Zealand	310	343	375
Australia	142	132	150
BUTTER			
World	**862**	**870**	**884**
New Zealand	399	416	424
EU*	167	155	143
Belarus	66	87	90
United States	51	58	68
Australia	66	57	50
CHEESE			
World	**1 907**	**2 215**	**2 336**
EU*	575	676	696
New Zealand	282	265	237
Australia	179	160	163
Belarus	105	133	150

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

Figure 55. FAO indices of dairy and feed prices (2002-2004=100)



Supplies to the world market come principally from the **EU,** followed by **New Zealand, Australia** and **Belarus.** In contrast to other dairy commodities, which are uniform products, cheese is traded in a wide variety of types, each with its own characteristics and in some cases, there are geographically specific limitations on its production. Therefore, it is more difficult to generalize about trends in trade and prices for this product. In fact, the prices quoted above refer to cheddar, which is just one type of cheese among the many traded. In the **EU,** higher profitability of cheese production compared with other dairy export commodities continues to lead to a steady growth trade, with the **Russian Federation** being a particularly important market. Sales from **Belarus** have also risen. In contrast, **New Zealand,** the second largest supplier to the market, has focussed more on supplying dairy processors with inputs (powder and butter fat) and, as a consequence, its exports of cheese have fallen.

FISH AND FISHERY PRODUCTS

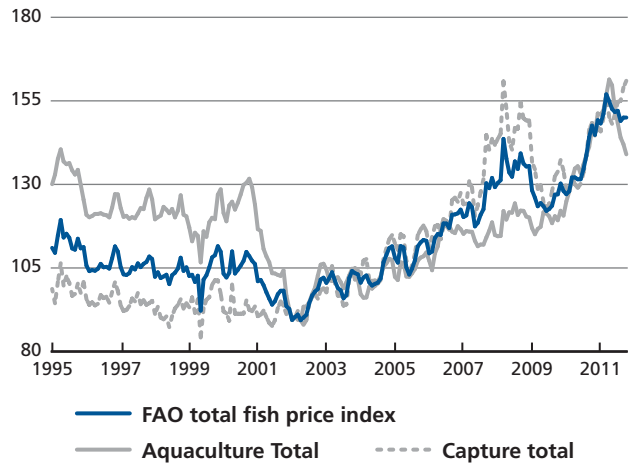
PRICES

International fish markets are influenced by growing economic uncertainty. Importers, processors and retailers in the large importing markets are scaling back on purchases, less willing to commit or to enter into any long-term contracts. As a result, prices on many fish products are declining after hitting the highest level ever in March 2011. Since then, as evidenced by the FAO Fish Price Index, aggregate price levels have declined for many fisheries commodities. However, as usual, the picture is not uniform, with supply constraints moving prices upwards for some species, including tuna, shrimp, tilapia, mackerel and herring. The biggest change in market conditions has been for farmed Atlantic salmon. After a strong 2010 with record price levels, prices crashed in May 2011 and the market still has not settled.

GLOBAL FISH ECONOMY: 2011-2012 OUTLOOK

After an excellent 2010, the current year is expected to be equally strong overall, despite the prevailing nervousness in many markets. Prices of some products and species will certainly soften, but the cause is more often to be found on the supply side rather than lack of demand. The underlying demand for fish and fishery products is strong and the stagnation seen in some traditional importing countries in consumption and imports is being compensated by buoyant demand in emerging markets in Asia, Africa, the Middle East, and South and Central America. Outlook for 2012 is more uncertain, but consistent demand increases in the developing world are boosting domestic and regional production and also fostering exports from developed to developing countries, contrary to the traditional direction of a trade that has normally seen developing countries supplying the developed economies.

Figure 56. The FAO Fish Price Index (2002-2004=100)



Data source: Norwegian Seafood Export Council

Table 23. World fish market at a glance

	2009	2010 estim.	2011 f'cast	Change: 2011 over 2010
	million tonnes			%
WORLD BALANCE				
Production	**144.8**	**146.9**	**151.7**	**3.2**
Capture fisheries	89.1	87.7	90.1	2.7
Aquaculture	55.7	59.2	61.6	4.0
Trade value (exports USD billion)	**95.7**	**107.5**	**119.7**	**11.3**
Trade volume (live weight)	**54.9**	**55.2**	**56.0**	**1.4**
Total utilization	**144.8**	**146.9**	**151.7**	**3.2**
Food	118.0	121.1	124.0	2.5
Feed	20.0	17.7	20.3	14.4
Other uses	6.8	8.1	7.3	-9.3
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/year)	17.3	17.6	17.8	1.3
From capture fisheries (kg/year)	9.1	9.0	9.0	-0.2
From aquaculture (kg/year)	8.2	8.6	8.8	2.8

FAO FISH PRICE INDEX[1] (2002-2004=100)	2009	2010	2011 Jan-Oct	Change: Jan-Oct 2011 over Jan-Oct 2010 %
	126	137	152	16.4

[1] Data source: Norwegian Seafood Export Council

GOOD DEMAND FOR SHRIMP DURING FIRST HALF OF 2011, DESPITE LOWER SUPPLY AND FIRMING PRICES

The major markets, the **EU, Japan**, and the **United States**, imported more shrimp during 2011, despite the higher prices caused by the lower than expected Asian supply. Demand for processed shrimp increased in the post-tsunami **Japanese** market as well as in the EU and the United States, confirming the positive broad-based market trend for value-added shrimp. The strong demand could soften if consumer sentiment turns negative, as shrimp consumption often depends on away-from-home dining and is sensitive to the economic climate.

During the first half of the year, **Thailand** exports fell back due to raw material constraints, whereas **China**, **India**, **Indonesia** and **Viet Nam** all saw exports grow. Regional demand for shrimp in many Asian markets remained buoyant, supported by strong national currencies and rising consumer income, even in India which is not traditionally a large market for fishery products. The growth of domestic consumption in developing countries is underpinning local aquaculture development and reduces industry exposure to sudden swings in international markets.

Figure 57. Main shrimp importing markets

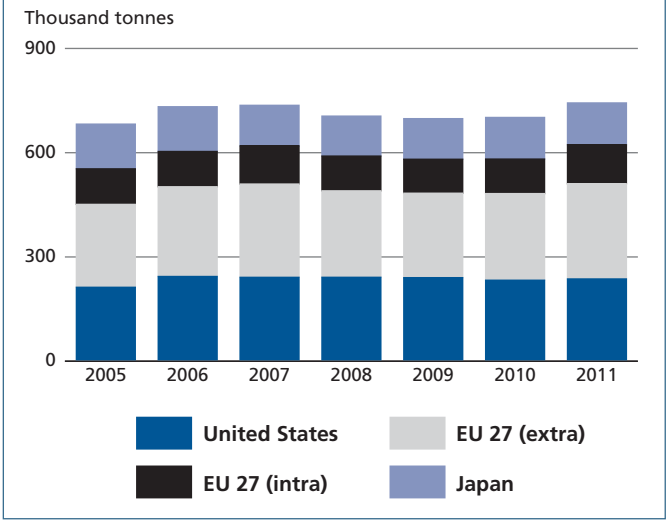


Table 24. Shrimp imports by product (Japan)

	January - June					
	2006	2007	2008	2009	2010	2011
	(thousand tonnes)					
Live	0.0	0.0	0.0	0.1	0.1	0.0
Fresh/chilled	0.0	0.0	0.0	0.0	0.0	1.0
Frozen, raw	95.5	85.3	84.1	85.2	86.4	83.6
Dried/salted/in brine	1.2	1.0	1.1	1.8	1.5	1.6
Cooked, frozen	7.9	8.0	9.1	8.7	9.7	9.8
Cooked & smoked	0.2	0.2	0.1	0.1	0.1	0.2
Prepared/preserved*	23.8	22.4	20.6	20.9	21.3	23.6
Sushi (with rice)	0.1	0.1	0.0	0.1	0.7	1.5
Total	**128.7**	**117.0**	**115.0**	**116.9**	**119.8**	**120.4**

(incl. tempura shrimp)Source: JFTA/INFOFISH

TUNA: RISING PRICES AND THE INDUSTRY UNDER ATTACK BY ENVIRONMENTALISTS

Skipjack raw material price reached an historic high level in September 2011, being quoted at USD 2 100 per tonne, cost and freight (CFR), Bangkok, surpassing the previous record set in 2008. Canners are concerned about consumer resistance under the current economic situation in Europe and the United States. Yellowfin raw material for canning has surpassed USD 3 000/tonne in Asia/Pacific because of slow catches.

Canned tuna has been under attack in the **United Kingdom** and the **United States** by non-governmental organizations (NGOs) who advocate pole-and-line caught tuna, without use of fish aggregating devices (FADs). In **Japan**, after austerity measures in the spring, *sashimi* tuna

Table 25. Frozen tuna imports (Japan)

	January-December			January-June		
	2008	2009		2009	2010	2011
	(thousand tonnes)					
Yellowfin	47.4	44.1	50.1	22.9	24.8	22.7
Bigeye	77.8	77.1	73.9	39.6	41.6	32.1
Skipjack	33.5	53.3	59.6	32.0	32.5	20.4
S. bluefin	7.4	6.9	6.7	1.0	1.2	0.5
Albacore	8.0	8.5	23.2	3.1	7.5	9.4
N. Bluefin	4.2	4.0	1.8	3.7	0.9	1.6
Total	**178.3**	**193.9**	**215.3**	**102.3**	**108.5**	**86.7**

Source: INFOFISH

consumption improved during the summer holidays and heightened in mid-August. The Unites States non-canned tuna market remains price sensitive.

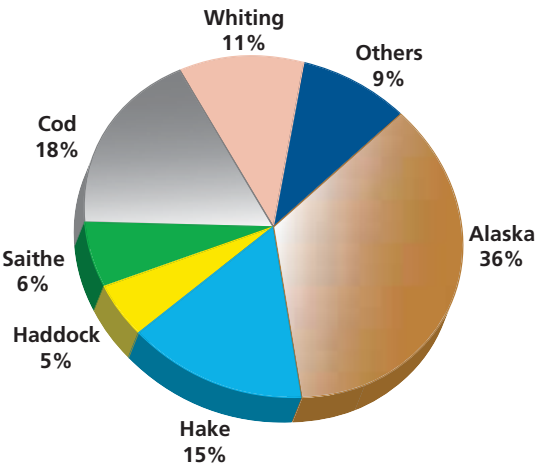
TOTAL GROUNDFISH SUPPLY EXPECTED TO IMPROVE BY 4PERCENT THIS YEAR AS MOST STOCK REMAIN HEALTHY

The outlook for groundfish in 2012 is promising. Based on the latest survey in the Barents Sea, **Russian Federation** and **Norway** agreed to increase their joint quota of North East Arctic cod by 7 percent to 751 000 tonnes for 2012. Their haddock quota will increase by 5 percent to 318 000 tonnes, and **Greenland** halibut by 20 percent to 18 000 tonnes.

Overall, the **EU** import dependency of whitefish imports is growing, now estimated by the European Union Fish Processors and Traders (AIPCE-CEP) at 89 percent of consumption, while the overall average level for fish imports is 62 percent.

In the **United States,** the new sector management system in New England for the groundfish fleet seems to be working for cod, haddock, flounder and pollock, with 10 percent more revenue generated.

Figure 58. Alaska pollock



Surimi production lower than expected after disappointing Alaska pollock catches

Early predictions, based on increased quotas for Alaska pollock and hake, and anticipating a good supply of surimi have not materialized. Pollock surimi production is likely to increase by only 28 percent to 135 000 tonnes in 2011, which is only half the expected increase, and hake surimi production is likely to drop. These expectations are also influenced by lower output from South America, with surimi production from hake, hoki and whiting in **Argentina** and **Chile** likely to decline 50 percent, to less than 10 000 tonnes.

Iceland: cod stocks reaching higher levels of biomass

Iceland's Marine Research Institute reports stronger cod stocks and a quota of 177 000 tonnes for 2011–2012, an increase of 10 percent. Iceland's haddock quota has been reduced 11 percent to 40 000 tonnes, and its pollock quota is at 52 000 tonnes, slightly higher than the 2010–2011 quota. During January–June 2011, the value of Icelandic demersal catches increased to a total value of USD 414 million. The value of cod was USD 210 million, haddock and redfish, USD 55 million each. **Norway**'s whitefish exports during the first half of 2011 totalled USD 4.5 billion, the highest export value ever. Exports of salted cod, clipfish and fresh cod were all up.

Apart from cod and pollock, less whitefish is expected from the **Russian Federation** for the rest of the year. Currently both Russian Bering Sea pollock and *Sea of Okhotsk pollock fisheries* are being assessed by the Marine Stewardship Council (MSC) for possible certification.

Southern Africa - opportunities and over-exploitation

South African fishing company Oceanfresh has agreed to supply hake fillets to 500 Walmart stores in the United States. This will enable Oceanfresh to expand production and create more jobs in the sector. In **Namibia**, recent press reports say scientists are warning that foreign interests may be putting too much pressure on already vulnerable hake stocks. It is estimated that hake population is now only 13 percent of its level in the 1960s.

Argentina's landings drop but prices move upwards

Landings of Argentinian hake from January to September 2011 reached 194 100 tonnes, 5 percent below the same period in 2010. January to June exports fell 20 percent to 54 500 tonnes, but prices were higher. Also, Argentina's hoki landings decreased significantly from January to September, declining 14 percent to 52 800 tonnes. On the other hand, exports reached 10 300 tonnes by 1 July, an increase of 8.3 percent. With higher prices. Argentina's hoki fisheries, an important groundfish species, are currently being assessed by the MSC for certification. **Uruguay**'s hake exports during January–June 2011 reached USD 43 million, a 26 percent increase. Volumes remained unchanged at 15 000 tonnes.

CEPHALOPODS

Lack of supplies push up octopus prices in world markets

Most octopus markets saw imports decline during the first half of 2011. **Japan's** imports were down 14 percent. However, there were major changes in supplier composition, with **Mauritania** shipping more octopus to Japan this year, while Moroccan exports were down sharply.

The diminishing catches of octopus have revived interest in octopus farming. In **Mexico**, the Ministry of Agriculture and Livestock reports success in raising octopus in captivity. Whether the new technology will be able to produce significant amounts of octopus of the right market size in the future remains to be seen, although progress so far is encouraging.

Good catches of squid boost supply

For squid, the supply situation is much improved. As an example, **Argentina's** fisheries saw landings almost 60 percent above 2010 volumes. Japan's imports grew 23 percent during the first half of 2011, although most of Japan's import increase was supplied by China. The good fishing season in South America was reflected in stronger exports to Europe during the first half of 2011. Although the **Falkland Island/Malvinas**' exports to **Spain** were fairly stable, Argentinean exports to Spain bounced back after a total absence last year. **United States** imports were slightly down during the period, as domestic catches were plentiful. The dominant supplier was China.

Cuttlefish prices on a positive long-term trend

Cuttlefish supplies are adequate for current market demand with **India** reporting close to a 20 percent growth in exports and at higher prices. **Japan's** imports of cuttlefish dropped 23 percent during the first six months of 2011. In Europe, **Italian** and **Spanish** cuttlefish imports, at around 25 000 and 50 000 tonnes, respectively for the full year, are quite stable.

WORLD TILAPIA DEMAND GROWING STEADILY BUT SUPPLY IS TIGHT

World demand for tilapia continues to grow at a steady pace, which, along with rising production and processing cost, and static supply caused by bad weather in **China**, is supporting world prices. Of an estimated global tilapia production of around 3.7 million tonnes in 2010, Chinese production remained steady at 1.2 million tonnes with new supply now coming from other Asian producers, and South and Central America as well as Africa.

Tilapia exports from China during the first half of 2011 grew by a modest 2 percent, reaching close to 140 000 tonnes of which 45 percent were frozen fillets. Of interest is China's rising exports of frozen whole tilapia to African markets such as **Cameroon**, **Ghana**, **Congo** and **Namibia**. This testifies to the competiveness of Chinese tilapia, but could also create difficulties for the emerging African producers of farmed tilapia.

PANGASIUS SUPPLY PROBLEMS BUT DEMAND IS STRONG

Supply issues continue to plague the pangasius sector in **Viet Nam**. According to the Viet Nam Association of Seafood Exporters and Processors (VASEP), output may drop 40 percent this year with farmers able to produce only 900 000 tonnes, equivalent to about 360 000–380 000 tonnes of fillets. **United States** imports during the first half of 2011 were stable at 38 000 tonnes while **EU** imports fell 9 percent. Although **Viet Nam** is the largest supplier to the EU markets, the product is also sourced from **China** and Thailand. Asian demand remains strong with new markets emerging, including those of **India** and the Middle East. The reduction in supply is likely to lead to an increase in prices, thereby encouraging Asian producers to raise output in 2012.

Quality matters

The use of additives, known as "moisture restorers", to retain water in the fish, and thereby increase the weight, caused some retailers in the **United Kingdom** to pull pangasius fillets from their shelves in 2011.

DECLINING SUPPLY OF NILE PERCH FORCE EUROPEAN WHITEFISH IMPORTERS TO LOOK FOR ALTERNATIVES

EU imports of Nile perch fillets during January–June 2011 reached 15 700 tonnes, making Nile perch the most imported freshwater fish in the EU after pangasius. However, with declining catches due to the unstable stock situation in Lake Victoria, the market for Nile perch in Europe could in part be supplemented by other species, such as tilapia, in particular in the foodservice sector. The EU must also compete with importers from emerging markets, in particular from the Middle East.

The EU has threatened to ban fish imports from **Uganda**, one of the main exporters of Nile perch, because of quality problems related to temperature levels and the use of unregulated additives to increase the weight of frozen fillets. The supply of Nile perch remains uncertain for the second half of 2012.

A BETTER RATIO BETWEEN DEMAND AND SUPPLY HAS KEPT SEABASS AND BREAM PRICES HIGH IN 2011 DESPITE SOME RECENT SEASONAL WEAKNESS

During late 2010, most producers scaled back production, leading to higher prices in 2011, in particular for bream for which prices reached levels not seen for many years. The situation has returned to normal, with seabass now quoted higher than bream, which is the usual picture. The strength of the **Turkish** economy has also played a part, as domestic consumption of the two species has been very positive.

The majority of consumers and producers are still found in Mediterranean countries, but sales have become promising in northern markets such as **Germany**, the **Russian Federation** and the **United Kingdom**. **United States** imports are limited but growing, with Greek shipments of fresh bass alone reaching 692 tonnes during the first six months of 2011, up 78 percent from 2010.

CRASH IN FARMED SALMON MARKET – RECORD PRICES IN EARLY 2011 DROP TO MONEY-LOSING LEVELS IN NO TIME

The first five months of 2011 were characterized by exceptionally high prices on farmed Atlantic salmon. Producers reaped tremendous margins, but processors and smokehouses that were not able to pass on the full price increases to their customers saw losses grow. Since then, prices have collapsed. Prices started weakening in early May and have not stabilized yet, with buyers unwilling to commit for large volumes, even at current levels. A number of causes contributed to the sudden price drop. The comeback of **Chilean** products onto world markets in 2011 was one factor. Also, plentiful catches of wild Pacific salmon supplied to the **Russian Federation** and the **United States** domestic markets contributed to weaker prices and lower import volumes. During November and December, the market is expected to correct due to seasonal demand. But from mid-2012, with new production coming to market from both **Chile** and **Norway**, prices could easily fall to very low levels.

Chilean salmon exports are staging a comeback this year after a difficult 2009 and 2010, and Chile is targeting its traditional markets of Japan and the United States,

Figure 59. Prices of seabass and seabream in Italy

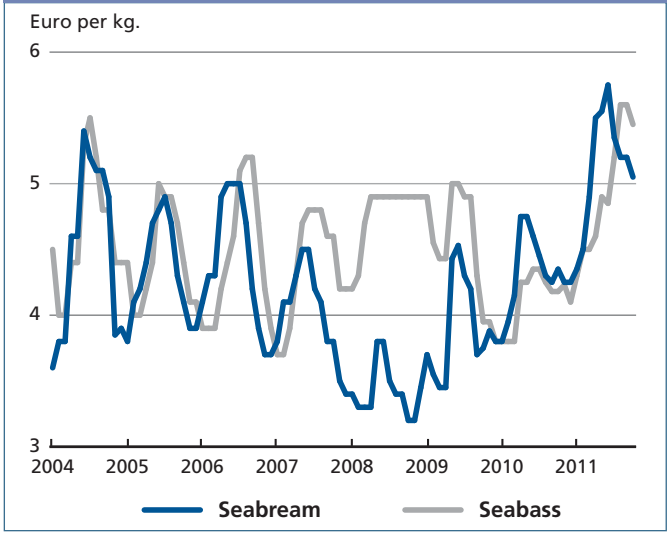
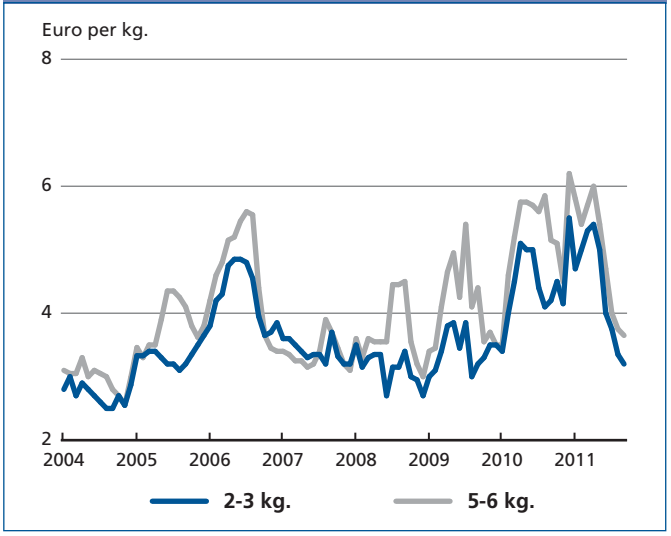


Figure 60. Prices of salmon in Europe, origin Norway



to gain back old customers. The fresh market in Brazil remains promising but the recent drop in the Brazilian *real* is hurting Chilean exporters. **Norway's** exports for the first nine months showed a 3 percent increase in volumes to 670 000 tonnes. As a result of the sharply lower prices from the third quarter onwards, the value of exports declined, albeit only marginally, to USD 3.9 billion. For the **United Kingdom**, the largest EU salmon producer, the United States has become its biggest market, followed by France. This is likely to change, as more products from Chile are becoming available in the United States. The United Kingdom has benefitted from Norway's problems in China, with the United Kingdom's exports to China increasing from zero to 2 000 tonnes during the first six months of 2011. **French** consumption and imports of salmon rose only marginally during the first six months. A big jump came in frozen fillet imports from China, for the most part Pacific salmon of Alaskan and Russian origin. In only two years, frozen fillets have risen by 46 percent, and are now 21 percent of total salmon imports, up from 16 percent during the same period in 2009. **United States** import volumes are down for the second reporting period in a row. Chile is back as supplier of fresh fillets, but volumes are still below 2009 figures. As a result, Norwegian exporters seem to be withdrawing from the United States fresh fillet market. In **Japan**, Chilean shipments were up 26 percent during the period, boosting Japan's overall salmon imports by 22 percent during the period to reach 85 900 tonnes.

BIG PRICES FOR SMALL PELAGICS

Lower mackerel landings boost prices

The Norwegian mackerel season had a slow start this year, and in **Spain**, where 90 percent of the quota for 2011 has been caught, the national mackerel fishery has been closed. This contributes to the tighter supply situation, as Chile's mackerel landings are also down considerably. By the end of September, **Norway** had exported 129 000 tonnes of mackerel worth USD 300 million which represented a decrease of 47 000 tonnes and USD 5 million from the same period in 2010. **China** has become Norway's largest market. From January–September, China imported 32 000 tonnes of frozen mackerel from Norway, followed by Japan (25 900 tonnes) and Russian Federation (14 400 tonnes).

Prices are up significantly with Norwegian export prices for round frozen mackerel during the first nine months of the year at Norwegian Kroner (NOK) 14 per kg, 40 percent higher than last year. Supplies are expected to increase during the rest of the year, and prices to come down a little. An important change is taking place in the utilization of the Icelandic mackerel. Today, 90 percent of **Iceland's** catches reportedly go for direct human consumption, compared with 2009 when 80 percent of catches were used for fishmeal and oil production.

Supplies of herring are well below last year's levels, boosting prices

Norway, the most important herring supplier, exported 203 500 tonnes during the first nine months of the year, down 28 percent. **Russian Federation** remains the largest market with 47 900 tonnes, followed by Nigeria (45 000 tonnes) and Ukraine (39 300 tonnes). The Russian Federation catches are also down substantially with total landings down 37 percent at the end of July, to 172 100 tonnes. As for mackerel, current prices are high with the average export price of frozen Norwegian herring during the first nine months of the year at USD 1.15 per kg, up 53 percent.

The **Japanese** herring market is relatively stable with imports at 23 000 tonnes during the first half of the year. The United States is by far its largest supplier, accounting for 16 800 tonnes or 73 percent of the total.

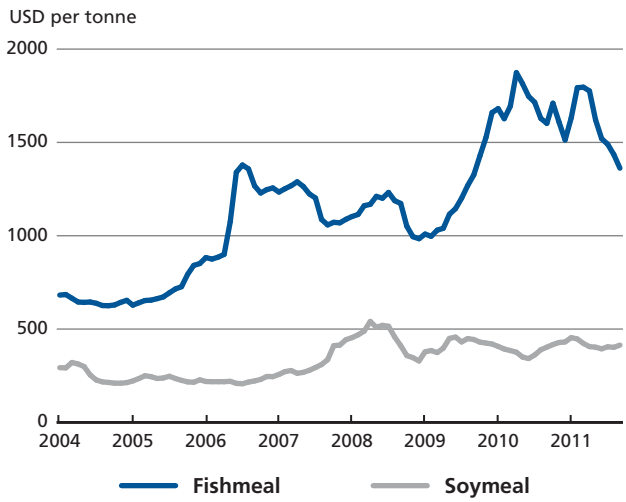
Market growth for canned small pelagic in non-traditional markets

Peru is reporting strong buying interest for canned sardines, mackerel and horse mackerel from **Brazil**, **Chile**, **Ecuador**, **Japan**, the **Republic of Korea**, **Thailand**, the **United States** and the Middle East. The Brazilian market for canned sardines is growing by 7.5 percent per year. Strong increases in imports led Brazil to impose a ban on imports of Peruvian sardines and anchovy earlier this year, claiming quality problems. European imports of canned sardines are declining, in particular in **Germany** and the **United Kingdom,** but the **French** market is also down. The main suppliers are **Morocco** and **Portugal.**

FISH MEAL PRICES REMAIN HIGH IN QUIET MARKET AS OPERATORS AWAIT QUOTAS FOR NEW FISHING SEASON IN PERU

With the quotas for the new season in **Chile** and **Peru** still not set, buyers are unwilling to commit but most are well covered for immediate needs. Quotas are expected to be at the same level as last year. Total fishmeal production in the five major reporting countries of the International Fishmeal and Fish Oil Organisation (IFFO) during the first six months of the year showed unchanged volumes of 1.6 million tonnes, the same as in 2010. However, there were significant changes among the producing areas, with South American

Figure 61. Prices of fishmeal and soymeal



production rising 21 percent thanks to a recovery of catches following the 2010 El Niño year. In Northern Europe, the situation was quite the opposite, with production falling 51 percent because of somewhat lower catches, but more importantly, a higher share of catches going to direct human consumption.

Despite some recent softening, prices remain at fairly high levels historically. On the demand side, there is growing uncertainty, given the economic slowdown in many large importing countries. Somewhat further weakening of prices could therefore become apparent in the next six months.

Despite increased production, fish oil exports from Chile and Peru were only marginally higher in first half of 2011

With the recovery of the Chilean salmon industry, Chile's need for fish oil is increasing substantially after a difficult 2009–2010 period. As a result, Peru's exports to Chile have grown during 2011 with Chile now being the largest market for Peruvian oil exports. As for fishmeal, the long-term outlook is positive as demand from aquaculture and terrestrial animal production is expected to grow strongly. For fish oil in particular, the demand for omega 3 and oil as dietary supplements will drive up prices. In the short term, prices will depend on the new catch quotas in Chile and Peru, the rate of recovery in the Chilean salmon industry and the overall demand for both marine aquaculture and dietary supplements.

AMIS

Agricultural Market Information System

ENHANCING MARKET TRANSPARENCY

Contents

AMIS Inception Meeting, 15-16 September 2011, Rome

Foreword

Markets are vital to agriculture and agriculture is vital to food security. The orderly functioning of markets is critical for food security from national and global perspectives. Because of plentiful supplies, reliance on international markets for food procurement has long been taken for granted. However, a rapid transformation of the food sector in recent years has generated high and volatile international prices and has strained capacity of the international food markets. This has complicated the policy choices for decision makers pursuing food security strategies. There is a compelling need for well-functioning international markets and the role of timely information and transparency with regard to food markets is critical.

To meet the rising demand for food, animal feed and increasingly biofuels over the past few years, more crops are being grown in those regions that are prone to unstable weather and erratic yields: a factor which explains the large discrepancy between production forecasts and final harvested figures in recent years. Evidently, less accurate production forecasts makes markets vulnerable to supply shocks and hence reduces market stability. Moreover, with inventories in major exporting countries much below their levels of previous decades, and more generally, a lack of reliable statistics on the level of stocks other than for a few traditional exporters the importance of accurate as well as up-to-date supply-and-demand statistics for major traded food commodities has never been greater. Market instability as manifested by sharp price swings, or volatility, is exacerbated by a lack of accurate information on the international supply and demand situation. Increasing information on global markets and enhancing transparency will reduce the incidence of panic-driven price surges of the kind seen in recent years. It should also permit better informed and coordinated policy decision-making to prevent the responses which can make international prices even more volatile.

This is the background against which the Agricultural Market Information System (AMIS) was established. This first, interim report introduces AMIS to a wide audience. It presents the rationale and process leading to the establishment of AMIS and illustrates the types of outputs that AMIS intends to provide in the coming months and years. It begins with two briefs, produced by the newly formed AMIS Secretariat (which is composed of nine international organizations). The first brief describes the mandate given to the international organizations by the Seoul Summit in November 2010 and summarizes their recommendations in response to it. The second explains the background to the setting up of AMIS and summarizes the outcome of the Inception Meeting, which launched AMIS in September 2011. This is followed by three short articles covering futures markets indicators, a review of cereal prices in domestic markets in the context of the spikes in the world market, and national policy responses to the price rises. These are the types of issues on which AMIS will be paying particular attention as it further develops its capacity to monitor, analyze and interpret market and policy developments.

AMIS, as with any other information system, will need time to mature. The AMIS Secretariat has done its best to expedite the process under the Chairmanship of France, the current President of G-20. An AMIS Web site is also near completion. It will be the core platform for all AMIS-related activities, and will be fully in the public domain. The Web site will facilitate up-to-date data extraction of information, collated from multiple sources, on selected agricultural commodities. It will also permit the participating member countries to input data and market information on their respective countries in a secure domain. AMIS will also convene meetings of technical experts to define, refine and develop quantitative indicators that will improve forecasting of price behavior. Ultimately, the success of AMIS will depend on close and continuing collaboration among all its members.

AMIS Secretariat
November 2011

Improving global governance for food security - The role of the international organizations

Context

G20[1] leaders, meeting at their Seoul Summit in November 2010, requested FAO, IFAD, IMF, OECD, UNCTAD, WFP, the World Bank and the WTO to work with key stakeholders "to develop options for G20 consideration on how to better mitigate and manage the risks associated with the price volatility of food and other agriculture commodities, without distorting market behaviour, ultimately to protect the most vulnerable." This mandate was part of a comprehensive Multi-Year Action Plan for Development, of which food security was one theme among several including infrastructure, human resource development, trade, private investment and job creation, and growth with resilience.

The initial group was quickly completed by the UN High-Level Task Force on the Global Food Security Crisis and by IFPRI. The consortium of these ten organizations, coordinated by FAO and OECD, worked in close collaboration with the French Presidency of G20, and provided the policy recommendations requested by leaders. Each of the organizations had undertaken extensive analysis of the problem, or had practical experience is trying to deal with the consequences. The first step involved taking stock of existing knowledge and analysis. As the process developed, each organization participated according to its comparative advantage and specific knowledge and expertise.

The problem definition

Before purporting to provide solutions, it was necessary to agree on the problem definition. The international organizations analyzed the causes and consequences of recent food price volatility and the implications for food security. The synthesis eventually presented to the G20 was comprehensive in scope, recognizing that the extreme price volatility of the 2007–2009 period had sharply added to a chronic problem of food insecurity that had been worsening since the mid-1990s. The approach reflected the view of the collaborating international organizations that price volatility and its effects on food security is a complex issue with many dimensions, agricultural and non-agricultural, short- and long-term, stemming from both supply and demand developments, with highly differentiated impacts on consumers and producers in developed and developing countries.

Differentiated responses

In proposing policy responses, it is important to distinguish between policy options designed to prevent or reduce price volatility and those designed to mitigate its consequences. Both types of intervention were explored in detail. The scope for actions was identified at individual, national, regional and international levels. Some proposed policy responses would help to avert a threat, others are in the nature of contingency plans to improve readiness, while still others address long-term issues of resilience. Finally, the report explores mechanisms of international cooperation to implement its recommendations and to monitor progress. The next sections summarize the rationale for each of the recommendations made by the international organizations and reproduces the recommendations themselves in their entirety.

A comprehensive set of proposals to deal with price volatility and food security

Measures to increase productivity, sustainability and resilience of agriculture

Acknowledging the existence of an underlying, chronic problem of food security, exacerbated in recent years by high and extremely volatile prices, the international organizations concurred that improving the long-term productivity, resilience and sustainability of agriculture, especially in developing countries should be put forward

[1] The Group of Twenty (G20) includes Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russian Federation, Saudi Arabia, South Africa, Republic of Korea, Turkey, United Kingdom, United States of America and the European Union.

as the key element in any long-term solution. This can contribute to improving food security in several ways. In addition to increasing production *per se*, it can reduce food price volatility, for example through increased productivity and improved technical management of production and of risk, and it can help farmers and households better cope with the effects of volatility, once it occurs. The set of recommendations put forward here (Recommendation 1), if implemented, would probably constitute the single most important contribution to an enduring solution to global food insecurity. While the benefits would accrue in the longer term, actions are needed immediately.

FAO estimates indicate that global agricultural production would need to grow by 70 percent by 2050 and, more specifically, by almost 100 percent in developing countries, to feed the growing population. In the medium and longer term, only investment in developing countries' agricultural sectors will result in sustainable increases in productivity, healthy markets, increased resilience to international price spikes and improved food security. Investments in infrastructure, extension services and education, as well as in research and development, can increase food supply in developing countries and improve the functioning of local agricultural markets, resulting in less volatile prices.

Recommendation 1

G20 governments commit to take comprehensive action to strengthen the longer term productivity, sustainability and resilience of the food and agriculture system world-wide, encompassing several elements.

- Improve food and agriculture innovation systems, encompassing public and private investments in scientific research and development, technology transfer, and education, training and advisory services and ensure that successful practices are scaled up.
- Strengthen the CGIAR system to support technological innovation and global dissemination of technology, in particular to improve productivity performance in less developed countries taking into account the needs of smallholder and especially women farmers.
- Support the development of technologies and provide the appropriate incentives to address challenges specific to climate change and sustainable resource use (land and water).
- Increase public (ODA and national governments) investment in developing country agriculture, and in activities strongly linked to agricultural productivity growth, such as agricultural institutions, extension services, roads, ports, power, storage, irrigation systems and information and communication technology, where appropriate. Link public investment to the provision of sustainable public-private-civil society partnerships.
- Support comprehensive national food security strategies that are country-owned and led, evidence-based and inclusive of civil society and farmer organizations. In this respect, follow up on previous G 20 commitments, such as the Pittsburgh summit commitment, to fund the Global Agriculture and Food Security Program.
- Provide the enabling environment for farmers and other private sector actors to scale up investments, above and beyond ODA and national government spending, to achieve the increased productivity and enhanced resilience on which long term food security will depend. To elicit the needed level of private sector investment, less developed countries in particular will need to support introduction of effective governance systems and institutions, stable macroeconomic conditions, sound structural policies, human capital development and public services.

The investments required in developing countries to support this expansion in agricultural output amount to an average annual net investment of USD 83 billion (in 2009 United States Dollars). This total includes investment needed in primary agriculture and necessary downstream services such as storage and processing facilities, but does not include public goods such as roads, large-scale irrigation projects and electrification.

Most of the investment, both in primary agriculture and downstream sectors, will have to come from private sources, primarily farmers themselves purchasing implements and machinery, improving soil fertility, etc. For a better functioning agricultural system and improved food security, three kinds of public investments are also needed:

- direct investment in agricultural research and development particularly on practices that enhance the resilience of small-scale agriculture to climate change and resource scarcity;

- investment in sectors strongly linked to agricultural productivity growth and to strengthening the integration of smallholders into markets, such as agricultural institutions, extension services, roads, ports, power, storage and irrigation systems;

- non-agricultural investment to enhance the rural institutional environment and bring about positive impacts on human well-being, such as investment in education, particularly of women; sanitation and clean water supply and health care.

An important pillar in the effort to improve long-term resilience relates to research, innovation and education. Among the specific dimensions identified as warranting particular attention were: research to enhance the resilience of small-scale agriculture to climate change and scarcity of water and other resources, research to enable agriculture to contribute to climate change mitigation and adaption, attention to innovative technologies for the production of staple crops that are important for smallholders and for food security, extension and education services especially for smallholders and women.

Policy options to reduce price volatility

Market information and transparency

The international organizations agreed that a lack of reliable and up-to-date information on crop supply, demand, stocks and export availability contributed to recent price volatility and induced some hasty and uncoordinated policy responses that actually exacerbated the situation. Better information and analysis of global and local markets and improved transparency could reduce the incidence and magnitude of panic-driven price surges. But action is needed to increase the capacity of nations and international organizations to undertake more frequent and systematic monitoring of the state of crops and stocks, and to develop mechanisms for improved short-run production forecasts.

Information on stocks is an essential component of a global food market information system, yet reliable data on stocks of grains and oilseeds are often not collected or, if collected, are not reported publicly. The reasons for poor stock data are multiple: some countries no longer hold public stocks because the policy measures that created them have been removed or reformed; stocks can be very dispersed among farmers, traders and other actors and difficult to track; and some information on stocks is commercially or strategically sensitive. Gaps or deficiencies also have been identified in the monitoring of food prices, in both cash and futures markets, on the relationship between oil prices and food markets, and on knowledge of how international price changes affect domestic markets in developing countries. To remedy these weaknesses in the global information systems, the international organizations made the following recommendation (Recommendation 2).

This proposal has been taken up by G20 members, and the AMIS system is currently being set up. AMIS developments are described in the next article.

International food stocks

The international organizations concluded that buffer stocks, stocks constituted and managed with the intention of influencing prices, have a poor record and that such schemes are particularly inappropriate and ineffective when the intention is to mitigate a price peak. Therefore, no specific recommendation was proposed with respect to buffer stocks. Under the heading of measures to assist the most vulnerable in coping with excessive price volatility, some specific recommendations were made concerning

Recommendation 2

Building upon existing mechanisms, establish an Agricultural Market Information System encompassing four elements.

- G20 governments commit to instruct statistical or other relevant agencies to provide timely and accurate data on food production, consumption, and stocks. Where the mechanisms and institutions are not in place nationally to do so, G20 governments should undertake to create them.
- International Organizations, with broad involvement of countries (G20 and other relevant players) commit to undertake monitoring, reporting and analysing of current conditions and policy developments in major markets as well as to enhance global food security by encouraging information sharing, improving data reliability and increasing transparency, and introducing a global early warning system.
- G-20 governments support the establishment of a Rapid Response Forum, with broad involvement of countries (G20 and other relevant players) building on the proposed Agricultural Markets Information System to promote policy coherence and coordination in times of crisis.
- International Organizations support the improvement of national or regional systems to monitor stocks, production, forecasts (with improved modelling and weather forecasting), food and nutrition security and vulnerability, in order to enhance Early Warning Systems in vulnerable developing countries and regions.

emergency, humanitarian stocks and their management. (These recommendations can be found in Recommendation 7).

Futures markets

The international organizations acknowledge the unresolved nature of the debate as to whether speculation on futures markets has had a stabilizing or destabilizing effect on prices during recent episodes. Some analysts purport that the influx of financial investors in commodity futures markets has scant impact on market prices. Other analysts stress that the large amount of money invested in commodity futures by financial investors has amplified price movements to an extent that cannot be explained by market fundamentals. The international organizations recognized that more research is needed to clarify these questions. With the needed clarification, regulators would be better equipped to reflect upon whether regulatory responses are needed and, if so, the nature and scale of those responses.

Despite these differences, there is widespread agreement that appropriate regulation needs to be in place across all relevant futures exchanges and markets, in order for agricultural commodity derivatives markets to function well and as intended in terms of hedging and price discovery. In particular, there is need for greater transparency about transactions across futures markets and especially across over-the-counter (OTC) markets, transactions that take place outside of the framework provided by the regulated commodity exchanges. Comprehensive trading data need to be reported to enable regulators and participants to monitor information about the frequency and the volume of transactions to understand what is driving commodity prices. It was also acknowledged that the specific nature of the regulatory framework for futures exchanges and OTC markets, whether for agriculture or other commodities, is an issue best addressed by financial market regulators. These conclusions led the combined international organizations to the following set of recommendations (Recommendation 3).

Reducing import barriers, trade distorting domestic support, and all forms of export subsidies

Trade is an excellent buffer for localized fluctuations that originate in domestic markets. Seasonal fluctuations and time lags in trade, and year-to-year variations in domestic production can be more effectively and

Recommendation 3

- G20 governments recognize the need to improve information and transparency in futures and over-the-counter markets and encourage appropriate rules to enhance their economic functions paying attention to the need for harmonization across exchanges in order to avoid regulatory arbitrage.
- Proposed changes should be considered in light of the on-going review of regulatory oversight of all financial markets and not solely agricultural commodity markets, in particular by G20 Finance Ministers and Central Bank Governors.
- The G20 supports the efforts made by the United States, the European Commission and others in addressing transparency and efficiency issues in futures markets.

much less expensively buffered by adjustments in the quantities imported or exported than through buffer stock management. To the extent that shocks tend to be specific to individual regions of the globe, and to partly cancel out on a worldwide level, world output of a given agricultural product is far less variable than output in individual countries. International trade is therefore a potentially powerful engine to even out supply fluctuations across the globe and, as a result, to reduce market volatility.

In the longer-term context, trade is an essential component of any food security strategy. There is significant potential for increased production in many parts of the world, but not all countries everywhere can or should aspire to supplying all their own needs. Doing so is excessively costly, and will reduce choice and quality, without providing the reliability needed to achieve food security. The changes in production patterns likely to be induced by climate change reinforce the need for a well functioning trading system that will allow food to move reliably from surplus to deficit areas.

Despite ongoing reforms, there are still significant barriers to trade in agricultural commodities among developing countries and between developing and OECD countries. They contribute to the "thinness" of international markets that has been blamed for some of the volatility experienced in recent years. Average tariffs on agricultural and food are high for middle income and high income countries, 25 percent and 22 percent, respectively. Protectionism on agricultural products is not only higher than on non-agricultural products (by a factor of four), it is also much more volatile. Agricultural trade policies are designed to insulate domestic prices from world markets and lead to pro-cyclic effects: protection decreases when prices are high, increasing demand on world markets, and protection increases when world prices are low, effectively operating as a variable levy. Therefore, large country trade policies increase world price volatility and create negative externalities for smaller countries. Developed countries continue to support their farming sectors significantly with, according to the latest estimates from the OECD, 18 percent of gross farm receipts generated through support mechanisms and more than half of that support delivered in ways that highly distort production and trade.

Disciplines on export restrictions were considered insufficient and weak during the 2007–2009 period, when export restrictions exacerbated or even, according to most experts, caused severe disruption and a collapse in confidence on international markets. Export restrictions have also contributed to the price increases and general market nervousness experienced throughout 2010 and 2011. Trust in international markets on the part of import dependent countries has been severely eroded and many of them have reverted to stronger self-sufficiency targets in response.

To ensure that international trade is a reliable source of food supply, net food importers should benefit from much stronger guarantees from their trading partners. A "first best option" would be a ban on export restrictions. Countries would address domestic food security issues with direct and targeted support. However, it is most unlikely that a ban on export restrictions would be agreed and, even if agreed, that it would be enforced during a food crisis. On the other hand, reinforced rules, in particular in terms of transparency, are both possible and useful.

Against this background the international organizations made the following recommendations covering production distorting domestic support and trade policy, particularly in respect of export restrictions (Recommendation 4).

Humanitarian exemptions from export restrictions

Some nations that imposed export restrictions during 2008 and 2010 made exemptions for purchases of humanitarian food, including those by WFP. However, others have not

made such exemptions, forcing in-country and international humanitarian agencies to purchase food from more distant sources. Most exemptions, if made, are on a case-by-case basis after concern has been raised and the exemption requested. This means valuable emergency response time and resources are lost, as procurement teams have to spend time negotiating, or finding alternative suppliers from other regions. The international organizations therefore proposed that the G20 adopt the following recommendation (Recommendation 5).

Recommendation 4

G20 governments demonstrate leadership in on-going WTO DDA negotiations, moving immediately to strengthen international disciplines on all forms of import and export restrictions, as well as domestic support schemes, that distort production incentives, discourage supply in response to market demand, and constrain international trade of food and agriculture products. Specifically:

- Substantially improve market access, while maintaining appropriate safeguards for developing countries, especially the most vulnerable ones.
- Substantially reduce trade distorting domestic support, especially by developed countries; and.
- Eliminate export subsidies.

Taking existing WTO rules into account and the state of play in the DDA negotiations G20 governments should:

- Develop an operational definition of a critical food shortage situation that might justify consideration of an export restricting measure. An export ban would be defined as a time-limited measure of last resort, allowed only when other measures, including triggering domestic safety net measures for the poorest, have been exhausted, and taking into account, in particular, the food security needs of least developed countries and net food importing developing countries.
- Widen, strengthen and enforce consultation and notification processes currently in place at the WTO. The intention to impose an export restriction would have to be notified in advance of the action being applied and a "fast track" consultation process could be put in place to discuss whether the measure can be avoided and how. Consultation should be on-going and regular with a view to ensuring that the measure, once in place, is removed at the earliest possible moment.

Reducing policy conflicts between food and fuel

Between 2000 and 2009, global output of bioethanol quadrupled and production of biodiesel increased tenfold. In OECD countries this has been largely driven by government support policies. The international organizations concur that this large, policy-induced demand shock, which has occurred over a relatively short period, had had several notable effects. It has contributed to the price increases, added to price volatility, mainly because mandates create legislative obligations to produce specified quantities irrespective of the price, and contributed to the run-down in stocks also thought to be a significant determinant of current high and volatile prices. The international organizations agreed that high priority should be given to the reform of policies that induce conflicts between the use of crops for food and fuel and made the following detailed recommendations (Recommendation 6).

Recommendation 5

- G20 governments strengthen the commitments made at the L'Aquila and Rome Summits, calling on all nations to allow purchases of humanitarian food, especially by WFP, to be exempted from food export restrictions and/or extraordinary taxes, so that humanitarian food can be purchased, exported and/or transited regardless of any prohibitions, restrictions or extraordinary taxes imposed; and resolve to bring this commitment and call to the UN General Assembly and to the WTO.

Recommendation 6

G20 governments remove provisions of current national policies that subsidize (or mandate) biofuel production or consumption. At the same time, governments should:

- Open international markets so that renewable fuels and feed stocks can be produced where it is economically, environmentally and socially feasible to do so, and traded more freely.
- Accelerate scientific research on alternative paths to reduced carbon emissions and to improved sustainability and energy security.
- Encourage more efficient energy use, including in agriculture itself, without drawing on finite resources, including those needed for food production.
- Failing a removal of support, G20 governments should develop contingency plans to adjust (at least temporarily) policies that stimulate biofuel production or consumption (in particular mandatory obligations) when global markets are under pressure and food supplies are endangered.

Policy options to deal with the consequences of price volatility, particularly for the most vulnerable

Coping with volatility in the short run: buffer stocks and emergency food reserves

Attempts to stabilize food prices using buffer stocks have proved either costly or ineffective. Market based initiatives may be superior in countering food price volatility and enhancing food security in developing countries. Private storage, such as village granaries, can help communities to better match local supply and demand. Private sector storage investments in developing countries, either on-farm, in villages or regionally, are constrained by poor policies and a poor enabling environment generally. Policies that would facilitate access to credit for storage improvements by farmers, cooperatives and private traders should be considered. Producer organizations are critical to food storage development. There also is need for training to build specialized storage management skills both for farmers' associations and cooperatives as well as for the private sector.

Relatively smaller food security emergency reserves can be used effectively and at lower cost to assist the most vulnerable. Unlike buffer stocks that attempt to offset price movements and which act as universal subsidies benefiting both poor and non-poor consumers, emergency food reserves can make food available to vulnerable population groups in times of crisis. In addition, emergency reserves of relatively small quantities of staple foods will not disrupt the normal private sector market development which is needed for long-term food security.

Governments in vulnerable countries should integrate such emergency food reserves in their national food security strategies. Emergency reserves should be integrated with social and food security safety nets and other food assistance programmes, to increase their effectiveness in benefiting the vulnerable. Finally, emergency reserves ought to be adequately resourced and financed, whether by governments, the international donor community, or both.

Reflecting these considerations the international organizations made the following recommendations (Recommendation 7).

Coping with volatility in the short run: International and national safety nets

In times of crisis, contingent and compensatory financing facilities are important mechanisms for assisting countries in avoiding major fiscal deficits and lowering the cost of imported food, while maintaining key social assistance programmes. Budget requirements present significant difficulties, especially for low- income developing countries which do not have the ability to accommodate counter-cyclical expenditures in times of crisis. Foreign support such as that provided under existing international safety nets operated by the World Bank and the IMF, will have to be mobilized if they are to meet the increased demand on their budgets, at a time when such budgetary outlays can have major repercussions on their economies.

Food price surges, as well as increased prices of inputs such as fertilizers, reduce the incomes of poor and vulnerable households, and put stress on family budgets. There are both humanitarian and economic rationale for interventions that mitigate the impact of the shock, maintaining the purchasing

Recommendation 7

- Recognizing the primary responsibility of countries themselves, G20 governments provide support where there is need to increase capacity to implement food emergency reserve systems
- G20 governments support the World Food Programme in the development of a cost-effective system of small, strategically positioned emergency food reserves by the end of 2011.
- A code of conduct be developed by International Organizations to ensure the free flow of humanitarian food supplies, to enhance responsibility and transparency, strengthen the global food security architecture and avoid negative effects on the market.
- G20 governments put in place sustained support for the efforts of humanitarian agencies to assist countries facing crises by ensuring that they have predictable and reliable access to the financing needed, (for example for advance purchasing facilities).

power of vulnerable consumers and the profitability of smallholders through safety nets. For poor consumers, scaling up existing safety nets is a viable option in countries where these are already in place. However, many poor and vulnerable nations and populations have no safety net systems in place and therefore need international assistance. Targeted food safety nets such as child nutrition schemes, job and asset creation and school feeding programmes help vulnerable people cope with price volatility or other shocks and can be scaled-up relatively easily in a crisis (Recommendation 8).

Coping with volatility in the long run: market-based mechanisms to protect producers against price and other risks and to stabilize food import bills

The nature of the risks facing farmers varies from one country to another. The capacity farmers have to deal with such risks also varies across different farmer categories. Smaller farmers may lack access to the knowledge, assets, technologies, market instruments and governance structures that would enable them to manage their risks adequately. In developing countries, smallholders with little capital and limited access to markets often have no possibility of protecting themselves against a variety of risks which characterize less developed agricultural sectors.

Governments face the same risks as farmers. Food production and price shocks can negatively affect their balance of payments and foreign currency reserves and worsen their ability to implement social safety programmes. Market-based mechanisms, such as the use of weather derivatives or hedging instruments to manage production and price risks, may provide an alternative option to international policy solutions such as compensatory financing facilities. However, given the technical nature of

Recommendation 8

- G20 governments support continued provision of efficient, well functioning international mechanisms to assist low income developing countries during food price crises, including provision of adequate contingent financing from the international financial institutions.
- G20 governments support the development of appropriate, targeted and cost effective national safety nets that can be stepped up when needed, ensuring that they are adequately resourced, contribute to the improvement of nutrition and link, when appropriate, to the proposed regional emergency food reserves and distribution systems.

such market-based approaches to managing food price volatility, there is a need to establish and train institutions at the national level (Recommendation 9).

Recommendation 9

- G-20 governments support the scale up of efforts to provide vulnerable households (including producers), communities and governments with effective, market-based risk management options.
- G-20 governments support the scale up of a broader set of fiscal risk management services which include facilitation of commodity hedging, advisory services to strengthen in-country financial risk management capacity, disaster risk financing, and modernization of meteorological services.

Improving international policy coordination in relation to food price volatility: market information and policy responses

Reference has already been made to the weaknesses exposed by the 2007–2008 crisis and again by events in 2010–2011, in relation to the provision of market information at the global level and the coordination of policy responses to food price volatility. In addition to improving the quality, frequency and timeliness of market information, as outlined in Recommendation 2 (AMIS), the international organizations put considerable emphasis on the need for countries to engage in discussion of appropriate policy responses with a view to increasing transparency and avoiding hasty or inconsistent actions that could have damaging consequences. This is the purpose of the Rapid Response Forum which is an integral part of the AMIS proposal contained in Recommendation 2. This important dimension of improved global governance around food security issues is reiterated in Recommendation 10 of the international organizations, which addresses international policy coordination and the role of the international organizations and the Committee on Global Food Security (Recommendation 10).

Recommendation 10

The G-20 should support the proposals made throughout this report to strengthen policy coordination in relation to food price volatility, building on and strengthening existing institutions and networks, improving coordination and timeliness in order to improve readiness, and promoting policy coherence and coordination in times of crisis. The international organisations that have prepared this report are asked to continue collaboration with the G20 to further elaborate the recommendations and, as appropriate, to implement them. The CFS should be charged with the broad task of monitoring the implementation of the recommendations of this report.

Next steps

G20 Agriculture Ministers met from 22 to 23 June and adopted a detailed Action Plan on Food Price Volatility and Agriculture, for submission to Leaders at the G20 Summit planned for 3 and 4 November 2011. The action plan focussed on five main pillars with specific immediate action prescribed and timetables indicated, where agreement could be reached. Further monitoring and analysis was requested in relation to other dimensions. The pillars identified by G20 Ministers were i) agricultural production and productivity; ii) market information and transparency; iii) international policy coordination; iv) reducing the effects of price volatility on the most vulnerable; and v) financial regulation.

The market information and transparency pillar received widespread support from all the G20 countries from the start. The rapid establishment of the Agricultural Market Information System (AMIS) in September 2011, only a few months after the June Ministerial Meeting, underscored the importance given to the issue by the G20 countries and the international organizations involved.

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Agricultural Market Information System (AMIS)

The last few years have been characterized by high and volatile food prices. Stronger demand for food crops, animal products and bio-energy in conjunction with slow growth in agricultural productivity and low stocks will continue to put upward pressure on prices and generate more volatility, In addition, over the past two decades grain production has expanded most in those regions of the world that are more prone to unstable weather. This contributes to food price fluctuations becoming more extreme while also makes the forecasting of food production difficult. According to the latest OECD-FAO Agricultural Outlook (2011-20), high and volatile food prices are likely to continue in the foreseeable future. Therefore, it is important to put effective global food market information mechanisms in place to increase transparency and to inform policy-makers.

Information on the current situation and the outlook for global agriculture shapes expectations of future prices and allows markets to function more efficiently. Better information to governments and market participants can improve transparency and enhance the market functioning. It can also underpin policy choices and market behaviour, thus reducing the incidence and magnitude of panic-driven price surges. Therefore reliable and up-to-date information on crop supply, demand, stocks and export availability can significantly help reduce volatility. It is important that governments and the international community increase their ability to respond rapidly and effectively to food price surges and their impact on food security.

The food price surges of 2008 and 2010 exposed a number of weaknesses in market information systems and in the coordination of actions and policy responses. Weaknesses included lack of reliable and up-to-date information on crop supply, demand, stocks and, especially, export availability from countries and regions. The absence of clear and comprehensive indicators for current market conditions and a lack of transparency resulted in hoarding, panic buying and suboptimal policy choices. At the global level, there is no effective and credible mechanism to identify serious food shortages, so it is difficult to establish links between information, abnormal market conditions and coordinated policy responses.

In their 22–23 June 2011 meeting, the G20 Ministers of Agriculture recognizing the importance of timely, accurate and transparent information in addressing food price volatility, launched the Agricultural Market Information System (AMIS), a collaborative food information initiative. AMIS builds on and complements existing systems and improves global food market information. AMIS is not a new international organization but is a platform through which countries, international organizations and the private sector can work together to strengthen synergies and collaboration in order to improve data reliability, timeliness and frequency. AMIS will also build developing countries' capacity in market outlook analysis and promote policy dialogue.

AMIS focuses on the global food commodities, and, at least initially, with matters relating to wheat, maize (corn), rice and soybeans. It is an open initiative. However, at this early stage, it will include major producing, consuming and exporting countries which together account for a large share of the world food market. Such participation will ensure that key information on factors that affect the food market will be available quickly, analysed and benefit everyone, thus providing a public good for the international community.

AMIS is managed by a joint Secretariat located in FAO, composed of nine international organizations (FAO, IFAD, OECD, UNCTAD, WFP, the World Bank, the WTO, IFPRI and the UN HLTF) with capacity to collect, analyse and disseminate information on a regular basis regarding the current and future food market situation and food policies. These organizations will ensure that the information outputs of AMIS are objective and factual. The International Grains Council (IGC) will cooperate in the development of AMIS, attending its expert meetings and exchanging market information.

The AMIS Secretariat is responsible for global food market outlook analysis based on information provided by the participating countries. It will develop appropriate methodologies and comprehensive indicators, reflecting food market developments in a meaningful way. The Secretariat will also be responsible for assessing the quality of data provided and for the provision and dissemination of high quality food market outlook information products in a timely manner.

In addition to the Secretariat, AMIS includes two groups, performing the following important functions: the *Global*

Food Market Information Group to collect and analyse food market information and the *Rapid Response Forum* to discuss policy responses.

The Global Food Market Information Group will provide information on production, stocks, trade, utilization and prices. It will include food market experts from the participating countries who will be responsible for:

- providing the Secretariat with continuous, quality, reliable, accurate, timely and comparable information on supply, demand and short-term trends;
- helping to improve national statistics and information and data systems;
- collecting information on, and analyzing national policies and their international effects.

The group will also identify gaps in information collection in participating countries and, through specific projects, will strive to build capacity to collect market outlook information and improve the quality of the data in terms of timeliness, coherence and completeness.

The Rapid Response Forum will enhance policy dialogue when the market situation and outlook indicates a high food security risk. As such the Forum will encourage the coordination of policies and the development of common strategies. It will be made up of senior policy-makers from the capitals of the participating countries who will meet when the food market situation warrants but will not decide on policies. Its objective is to promote discussions on options in order to enhance policy coordination. More specifically the Rapid Response Policy Forum will:

- promote early exchange of key information on, and discussion of, prevention and responses to crises among policy-makers;
- assist in mobilizing wide and rapid political support for appropriate policy response and actions on issues affecting agricultural production and markets in times of crisis without seeking to influence humanitarian responses;
- brief and interact with the Bureau of the Committee on World Food Security (CFS) in its deliberations (as proposed by the G20).

The relationship between CFS and AMIS is important. CFS is the foremost inclusive international and intergovernmental platform dealing with food security and nutrition. It provides a platform for coordination and promotes greater policy convergence through the development of international strategies and policy guidelines on food security. CFS includes countries, international organizations, experts and civil society, particularly organizations representing smallholder family farmers, in the policy debate. Its decisions are based on scientific evidence and state of the art knowledge.

AMIS could complement CFS in its efforts to respond to the challenges that emerge from highly volatile food prices. In the AMIS inception meeting 15–16 September 2011, participants recommended making the CFS Chair a Permanent Observer and establishing a mechanism for collaboration between CFS and the Rapid Response Forum. Such strong synergies would make information relevant to food price volatility, actions and policies by various bodies and the food security situation, including threats, available to the CFS Bureau.

The AMIS Terms of Reference as well as its Rules and Procedures as agreed at the inception meeting is reproduced below for reference.

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Terms of Reference

1. AMIS is an initiative of the G20[1]. It is a global agricultural market information system that concerns itself, at least initially, with matters relating to wheat, maize (corn), rice and soybeans. It is designed to:

   a. improve agricultural market information, analyses and forecasts at both national and international levels;

   b. report on *abnormal*[2] international market conditions, including structural weaknesses, as appropriate, and strengthen global early warning capacity on these movements;

   c. collect and analyse policy information, promote dialogue and responses, and international policy coordination;

   d. build data collection capacity in participating countries.

   This is an open initiative. However, in a first step it will be the result of a collaborative effort between main producing, exporting and importing countries, in association with international organizations and involving the private sector subject to conditions to be defined by participating countries. The participation of any new country is approved by the participants. The Chair of the Committee on World Food Security (CFS) is a Permanent Observer in AMIS. AMIS operates, to the extent possible, by electronic means in order to promote efficiency.

2. In order to ensure the effective discharge of the functions of AMIS, participants commit to provide to the AMIS Secretariat, as far as practicable, in a regular and timely manner, data and information as requested by the Information Group. This includes:

   - National data and relevant supporting information on production, consumption, import, export, stocks and prices for the selected commodities and information concerning the short-term information outlook;
   - Information concerning policy changes likely to impact on the production and trade of the selected commodities;
   - Participation in meetings of the information Group and Forum;
   - Liaison with the information Group and secretariat in the improvement of statistics and information.

3. To carry out its functions, AMIS is composed of:

   a) **The Secretariat** The Secretariat is formed by the following international organizations and entities: FAO, IFAD, IFPRI, WFP, OECD, World Bank, WTO, the UN High Level Task Force (UN-HLTF) and UNCTAD[3]. Organizations contributing financial or staff resources to AMIS have a decision-making role with respect to the overall planning and day-to-day implementation of AMIS. Contributions from the International Organizations to the fulfilment

[1] Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, Republic of Korea, Turkey, United Kingdom, United States of America, and the European Union.

[2] The Secretariat will convene, as early as possible, a meeting of experts from international organisations to clarify the concept and definition of "abnormal international market conditions" and to work towards the development of a set of indicators to measure such movements.

[3] To date, FAO, OECD, WFP and World Bank have taken the lead in setting up the Secretariat. Other international organizations have indicated their commitment.

Terms of Reference (continued)

of the functions of the Secretariat will reflect those organizations' comparative advantage and expertise. The Secretariat is housed in FAO headquarters in Rome, supports all functions of the Forum and the Information Group of AMIS, and fulfills the following functions:

i. organizes the meetings of AMIS and prepares documents for the Forum and the Information Group;

ii. assesses the quality of data provided by participating countries and produces high quality market outlook information products for frequent dissemination;

iii. assesses capacity development needs in member countries, in coordination with relevant International Organisations, Regional Organisations and supports development of national market information systems; AMIS efforts in capacity building will focus on:

- a manual defining best practices and methodologies for agricultural market data collection and analysis;
- a series of regional training sessions to enhance data collection capacity and to assist in the development of methodologies for food market outlook; and,
- the identification, design and implementation of special projects, aiming at enhancing data collection, analysis and outlooks.

iv. ensures liaison and regular information exchange with its members organisations, other international organisations and market monitoring agencies, including the International Grains Council (IGC);

v. develops appropriate methodologies and global indicators in collaboration with the Information Group;

vi. if warranted, and where there is a particular urgency for policy coordination, draws the attention of the Rapid Response Forum ('Forum'), on the basis of the work described in points ii and v above;

vii. in collaboration with the Chair, ensures liaison and regular exchange of information with the Secretariat and Bureau of the Committee on World Food Security (CFS);

viii. receives information on food security assessments in vulnerable countries from national, regional and international early warning systems, including the FAO Global Information and Early Warning System (GIEWS) and the Food Security Analysis Service (VAM) of the WFP;

ix. issues press communiqués concerning the activities of AMIS, in consultation with the Chair of the Information Group and the Forum;

x. acquires funds for the operation and activities of AMIS in conformity with the Financial Regulations of FAO and in accordance with the principles set out in the Action Plan; and

Terms of Reference (continued)

xi. inform the Information Group and the Forum regarding its main activities and outputs, and:

xii. undertakes such other functions in support of AMIS, as required.

b) **The Global Food Market Information Group ('Information Group')** The Information Group consists of technical representatives from countries participating in AMIS. The field of competence of the Information Group covers production, stocks, trade, utilization and prices (including futures prices). Its members fulfill the following functions:

i. provide regular reliable, accurate, timely and comparable data regarding the supply and demand position and its probable short term development, as well as regarding prices, of the four commodities covered by AMIS with the view to support its early warning aspects;

ii. organize the timely collection of national policy developments that could impact the market situation and outlook and collation of reports covering agricultural markets, in particular for commodities covered by AMIS;

iii. promote the improvement of statistics and information, including the enhancement of national information systems as well as related databases;

iv. act as a conduit to each AMIS member country to facilitate the sharing of data and market information;

v. share improvements on data collection methods and provide the Secretariat with guidance on capacity building; and

vi. work closely with the AMIS Secretariat, exchanging relevant information on a timely basis and representing their country at AMIS meetings.

c) **The Rapid Response Forum ('Forum')** The Forum is composed of Senior Officials from countries participating in AMIS. It is designed to promote early discussion among decision-level officials about *abnormal* international market conditions to encourage the coordination of policies and the development of common strategies. In particular, it:

i. promotes early information exchange and discussion on crisis prevention and responses among policy-makers;

ii. assists in mobilizing wide and rapid political support for appropriate policy response and actions on issues affecting agricultural production and markets in times of crisis, without seeking to influence humanitarian responses; and

iii. briefs and maintains a two-way dialogue with the Secretariat and the Bureau of the Committee of World Food Security on the deliberations of the Forum.

Rules of Procedure

1. **The Agricultural Market Information System (AMIS**) consists of:

   a) The Secretariat, which is responsible for producing market outlooks, assessments and analyses, for supporting all functions of the Forum and the Information Group, and for performing such other functions as provided in these Rules; and

   b) The Global Food Market Information Group ('Information Group'), which provides and assesses market and policy information; and

   c) The Rapid Response Forum ('Forum'), which promotes early discussion among decision-level officials about abnormal international market conditions to encourage coordination of policies and the development of common strategies.

   The functions and roles of the Forum, the Information Group and the Secretariat are described in the "Terms of Reference" of AMIS.

2. **Participants:** The Participants in AMIS are the G20 countries, Spain, as well as non-G20 countries that are approved by the Participants of AMIS on the basis of their significant share in global production and trade for those commodities covered by AMIS.

3. **Secretariat:** The Secretariat of AMIS is formed by the following International Organizations and entities ('International Organizations'): FAO, IFAD, IFPRI, WFP, OECD, World Bank, WTO, UNCTAD, and the UN High Level Task Force (UN-HLTF)[1]. The Secretariat is housed in FAO headquarters in Rome and conducts its activities in conformity with the Financial Regulations of FAO.

4. **Chair:** The participants in AMIS elect a Chair country from among the countries participating in AMIS to preside over meetings of the Forum and the Information Group. The Chair country is elected for one year.

5. **Secretary:** The International Organizations forming the Secretariat appoint a Secretary whose employment is governed by the Staff Regulations of FAO. The Secretary performs such duties as the work of the Secretariat may require, and prepares the records of the AMIS meetings. Should the Secretary be an employee from an international organization other than FAO, his/her services will be seconded to FAO.

6. **Meetings of the Forum:** The Forum will meet as needed, but in principle not less than once per year, and will promote early discussion among decision-level officials whenever there is a need for coordination of policies and the development of common strategies. Meetings will, to the extent possible, be held back-to-back with other international meetings to promote efficiency.

7. **Meetings of the Information Group:** The Information Group holds at least two meetings per year. However, the Chair may, in consultation with the Secretary, call for additional meetings if deemed necessary. To the extent possible, those meetings will be held through electronic means.

[1] To date FAO, OECD, WFP and the World Bank have indicated that they will assign staff to the Secretariat.

Rules of Procedure (continued)

8. **Agendas:** The Secretary of AMIS, in consultation with the Chair, prepares provisional agendas and circulates them two weeks in advance of meetings of the Forum and the Information Group to all participants. This requirement does not apply for meetings of the Forum in cases of urgency, as determined by the Chair. Participants may, by general consent, modify the agendas of meetings of the Forum and the Information Group. Each meeting of the Forum and the Information Group will begin with a presentation of the agenda for modification and/or adoption by participants.

9. **Location:** Meetings of the Forum and the Information Group will normally be held at FAO headquarters in Rome, Italy, or at the facilities of one of the participating organizations or countries, subject to the approval of the Chair and the Secretary.

10. **Language:** The language of meetings of the Forum and the Information Group, their working documents and reports, will be English.

11. **Recommendations:** The presence of more than half of the participants in AMIS is required at meetings of the Forum and the Information Group to establish a quorum. Recommendations will be made on the basis of consensus among AMIS participants.

12. **International Organizations:** Meetings of the Forum and the Information Group may be attended by representatives from International Organizations that are not taking part in the Secretariat, who can make interventions.

13. **Experts and Observers:** The Secretary and the Information Group may invite experts and observers, subject to conditions to be defined by the participating countries, including the private sector and relevant market monitoring agencies, to contribute to the work of AMIS and participate in meetings of the Information Group.

14. **Reports:** The deliberations and recommendations of the meetings of the Forum and the Information Group are reflected in meeting reports, which are circulated to all participants in AMIS, complying rules decided by respective above mentioned groups.

15. **Status of Rules:** The foregoing rules are agreed to by the participants of AMIS. They may be modified by consensus.

Futures markets signal change: Interpreting price behaviour

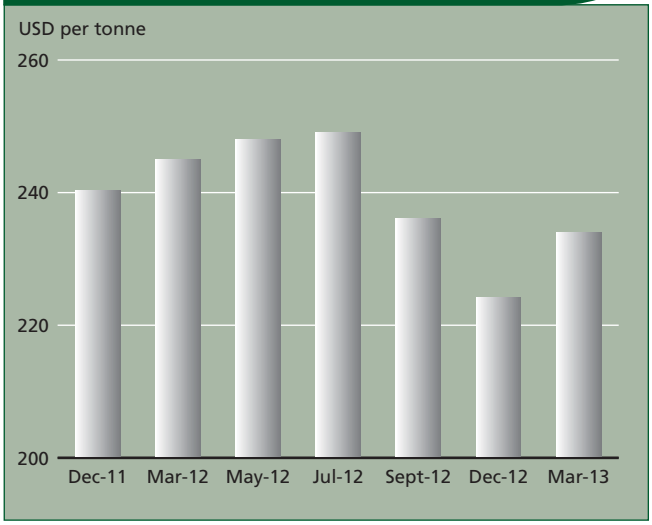
Greater understanding of global markets is one of the main objectives of AMIS. For this reason, identifying indicators which can signal changing market conditions on a timely basis will be among its first outputs. This section briefly describes two indicators, commonly used by participants in the futures and cash markets, which are relevant to importers and exporters. The first indicator, calendar spread differentials, provides a gauge of the overall supply and demand of the commodities covered by AMIS; the second, price arbitrage, provides a gauge of geographical (United States and Europe) supply and demand. In addition, this section describes a methodology for improved understanding of price behaviour which calls for mapping price together with volume in the form of a market profile.

Calendar spread differentials

Calendar spread differentials (hereinafter called "spreads") are derived from the closing prices of the sequential contract months of any commodity futures contract. They indicate expectations of near and distant prices, which are particularly relevant for renewable commodities such as grains and oilseeds which experience a yearly harvest, in contrast to metals and most energy products that are stored in the earth until extracted. Spreads in grains usually reflect the northern hemisphere crop cycle, which commences in June/July for winter wheat and October/November for maize, rice, soybeans and spring wheat. However, southern hemisphere crops, particularly soybeans, that are harvested mostly in April/May have increasingly impacted spreads as these supplies have grown enormously in the past 20 years and comprise a significant part of the export market.

Futures prices are characterized as either upward sloping, meaning that futures contracts reflect successively higher prices, called "contango", or downward sloping, called "backwardation". Markets exhibiting contango indicate a surplus supply situation and those exhibiting backwardation a deficit. Historically, most grains and oilseeds exhibit both within the crop year. The contract months representing harvest through mid-season usually configure in contango, reflecting the market's willingness to store commodities. The contracts representing the latter half of the crop cycle often configure in backwardation, reflecting the market's need to draw out the diminishing supplies or, in cases of extreme supply deficits, the market's need to ration demand.

Figure 1: CBOT maize futures settlement prices 10 October 2011 showing both contango and backwardation, a normal configuration for most grain and oilseed commodity futures markets



The arithmetic differences between the various contract months of a single commodity futures contract are called "calendar spreads" and quoted as tradable differentials in the marketplace. When the deferred month of the spread is higher than the nearby month, then the spread is quoted on a negative basis. If, for example, 2011 December maize is trading at USD 240/tonne (USD 6.09/bu) and the 2012 March maize is trading at USD 245/tonne (USD 6.22/bu), given liquid arbitrage between these two prices, the December/March maize spread would be quoted at minus USD 5.00/tonne or USD 5.00 under (-USD .13/bu). Conversely, if the July 2012 maize is trading at USD 249/tonne (USD 6.32/bu) and can be arbitraged against the December 2012 maize at USD 224/tonne (USD 5.69/bu), then the spread would be quoted at plus USD 25/tonne or USD 25 over (+USD .63/bu). Spreads are heavily traded as differentials by both commercial and speculative traders; indeed the Commitment of Traders Report (CFTC) reserves a separate category for spread trading as a percentage of open Interest by both managed money and swaps dealers.

The trade strategy of buying the nearby month and selling deferred is called a "bull spread", while doing the opposite is called a "bear spread". The spreads representing the old and new crop months, i.e. the July/December maize spread or the July/November soybean spread are the most highly watched and the most revealing of the supply-and-demand situation. They indicate both the resolution of the old crop balance sheet and the harvest crop prospects.

Spreads are dynamic price indicators as evidenced by the 2010–2011 marketing season. The CBOT July/September 2011 wheat spread experienced an historical move from a steep contango of -USD18/tonne (-USD.50/bu) to even money (zero differential) in July 2011 when the wheat basis in the delivery market shot up sharply. Traders cited heavy substitution of wheat for maize by both feeders and ethanol plants, owing to wheat's discount to maize. As a result, the end users in Chicago and Toledo accustomed to buying spot were caught short of the physical supplies and they, as well as other traders, used the July contract as a long hedge against their shorts. With respect to maize, both

Figure 2: CBOT Wheat Calendar Spreads during May 2011, exhibiting July-September Contango

Figure 3: CBOT Wheat Calendar Spreads during July 2011, exhibiting July-September Even Values

Figure 4: CBOT Maize Calendar Spreads during July 2011, exhibiting September-December Backwardation

Figure 5: CBOT Maize Calendar Spreads during September 2011, exhibiting September-December Contango

Figure 6: July/Sept 2011 CBOT wheat spread – Range from - USD 18 to USD 0 (per tonne)

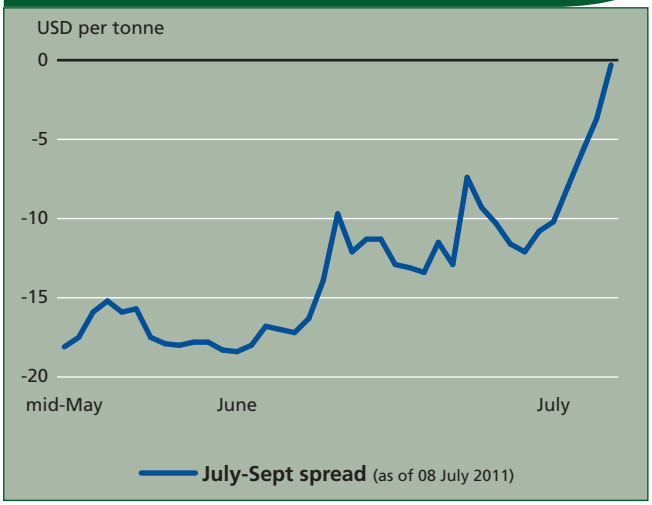


Figure 7: September/December 2011 CBOT maize spread – Range from + USD 20 to - USD 5 (per tonne)

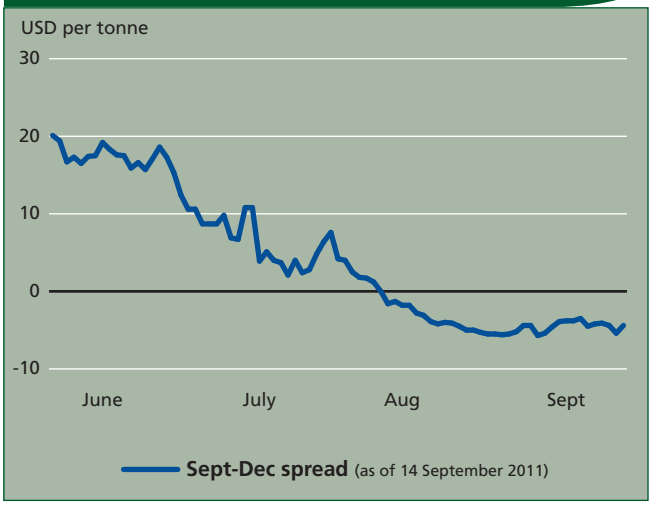


Figure 8: April 2011: CBOT and NYSE Liffe (Matif) Wheat Futures (May 2011 contract)

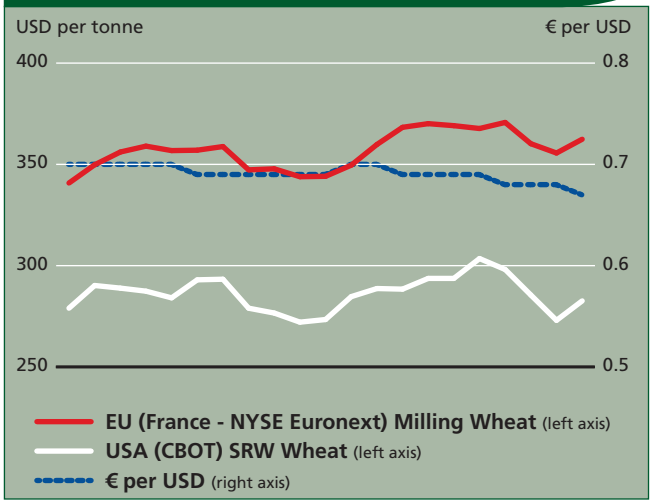


Figure 9: April 2011: KCBT and NYSE Liffe Wheat Futures (May 2011 Contract)

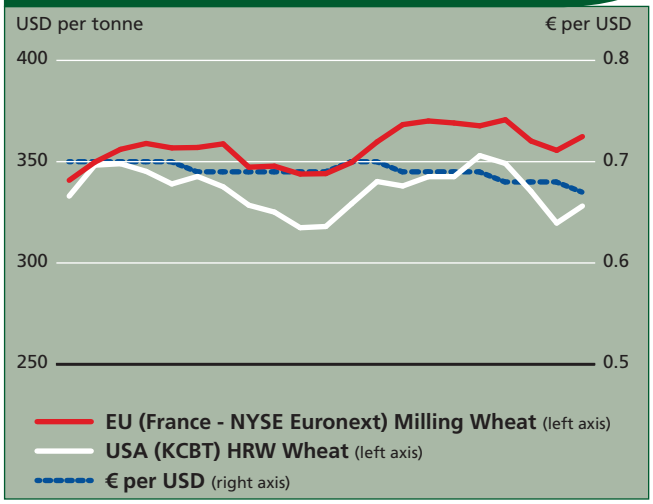


Figure 10: August 2011: CBOT and NYSE Liffe Wheat Futures

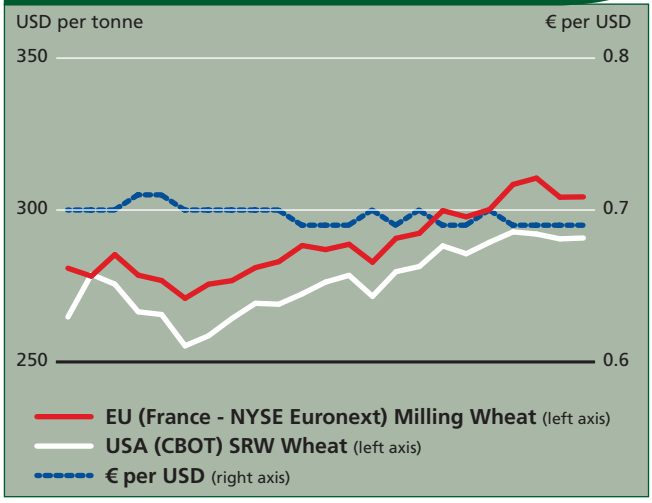
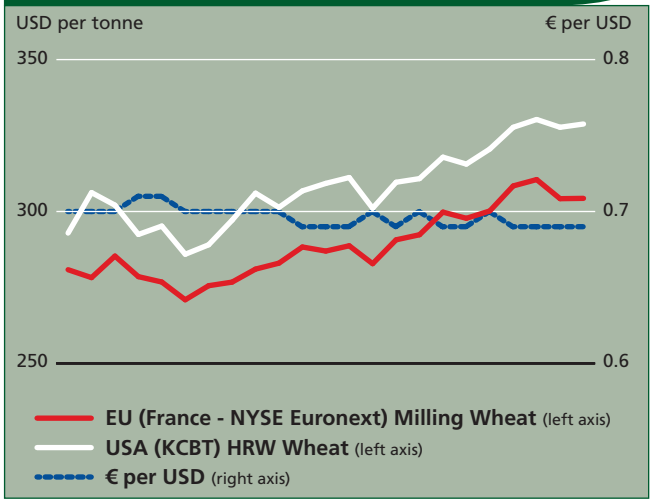


Figure 11: August 2011: KCBT and NYSE Liffe Wheat Futures



wheat for maize substitution and overall demand rationing as a result of the sustained high price was signalled by the September/December maize spread: it collapsed from its backwardation level of USD 20/tonne over (+USD .51/bu) to USD 5.5/tonne under (-USD .15/bu). Indeed, the USDA 30 September 2011 stocks report validated the amount of demand rationing that occurred during the last quarter of the crop year by publishing an ending stock figure of 1.13 billion bushels (28.7 million tonnes) for 2010/11 season, 22 percent higher than previously reported. Spreads are significant warning mechanisms of changed market conditions. As such, spreads need to be monitored on a regular basis.

Price Arbitrage – United States versus French Wheat

Although the CBOT soft red wheat contract remains the most liquid wheat contract in the world, the Matif milling wheat contract, has grown rapidly in volume since the 2007 food crisis and now provides a valuable enhancement to the global wheat price picture. Unlike many recently developed futures contracts that seek to manage price on a country level (China, India, South Africa), the Matif contract is an export contract with its price determined by deliveries in-store Rouen, a deep water port in northern France. The open interest in the Matif contract stood at around 245 000 contracts (12.25 million tonnes) at the end of September 2011 and daily trading volume has averaged around a million MT per day since the start of 2011.

A comparison between the Matif wheat and CCBOT/KCBT wheat would help to explain regional supply and demand balances at a glance. An examination of the two pairs of monthly wheat price charts, April 2011 and August 2011, reveals the price response to the changing regional balance sheets. During April, Matif wheat was a large premium to CBOT wheat and lesser premium to KCBT Hard Red Wheat, as a result of the diminished production and export controls in the Black Sea region. Following the favourable early outlook for the 2011 crop and the Russian Federation's announcement in July 2011 that it would resume wheat export shipments, French wheat experienced a sharp decline in its premium over CBOT and a reversal, from premium to discount, against KCBT.

Market Profile

Market profile is a system developed by the CBOT together with an independent trader 25 years ago that examines price and volume data to determine a price range of "market acceptance". According to market profile theory, the price auction process organizes price and volume into a bell curve over time, with the mode reflecting the highest volume. The prices that represent 70 percent of the trade are considered the "value area" and the prices below and above (approximately one standard deviation from the mean) are deemed the support and resistance levels. Prices approximately two standard deviations away from the mode are deemed "rejected". Prices remain range bound until a new set of prices begins to build in volume outside the bounds of the previous bell curve. Proponents of this methodology claim that organizing price data in the form of a bell curve based on trade volumes provides a map of the price discovery, rendering a more meaningful picture of transactions than charting, which focuses solely on the price series over time.

Analysts cite the strength of this trade system (i.e. the bell curve) because it:

- is statistically valid;
- reflects actual market development;
- reveals depth and breadth of market;
- identifies support and resistance levels;
- eliminates the seeming randomness of markets;
- validates the auction market theory which posits that prices cluster around a value area mutually determined by buyers and sellers;
- reveals how markets spend most of their time in horizontal development (price consolidation) rather than trending.

Market profiling appears to be undergoing a revival following some adjustments to its methodology, necessitated in part by the migration from pit trading to electronic. The system appears to contain medium- to long-term price analysis that could qualify it as another sound market indicator. Because it can readily identify the value

area of every grain and oilseed commodity, it could prove particularly useful to food-deficit countries trying to cope with commodity price volatility. Shown alongside a standard price chart, it would immediately identify which price spikes (both up and down) failed to gain "market acceptance." As such, Market Profile would complement historical/implied volatility, which reflects price variability without regard to volumes traded.

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National policy responses to cereal price spikes during 2007-2011

One of the important areas of work of the AMIS is collecting information on national policies on a timely basis and analysing them for their consequences for the global food markets. This review of recent policies is an example of the type of policy briefs that AMIS will strive to present in the coming months and years.

The generally high food prices and increased volatility in the global food markets since 2007, with five spikes in cereal prices in particular, triggered many and varied policy responses across the world as country after country faced rapidly rising food prices in their domestic markets (as documented in the next note). Several agencies have compiled information on policy responses on foodstuffs during this period. For example, a 2008 FAO survey based on information for 77 countries found that about half of the countries surveyed took measures to reduce food import taxes, 55 percent used price controls or consumer subsidies, 25 percent imposed some form of export restrictions, 25 percent took actions to increase supply drawing on cereal stocks and 16 percent showed no policy activities whatsoever. A similar picture emerged from more recent updates by FAO and other agencies and researchers.

The purpose of this note is similar. It summarizes policy responses under the following five headings, albeit selective but reflecting both longer- and shorter-term measures: i) increasing prioritization to food production and higher self-sufficiency targets; ii) higher outlays on food production; iii) increasing trends towards greater public sector involvement in domestic food markets; iv) varied ad hoc responses to contain food prices; and v) export restrictions. The commentary also highlights emerging issues and national debates on food policy.

Increasing emphasis on food production and self-sufficiency

The food crisis has prompted many countries to accord greater weight to food production and set higher targets for self-sufficiency, as part of their national food security strategies. While increased import parity price naturally moves domestic food production levels upwards, much of these policy responses appear to be related to the food crises and experience with price spikes. There is a feeling that the world food markets have become less reliable. In some cases, these policy positions were articulated earlier but were reiterated as a response to the crisis. For example, China had a policy of "grain security" for some years, with a target of 95 percent self-sufficiency. But support to grain production was stepped up markedly during the past four years and in November 2009, China released its *National Plan for Expansion of Grain Production Capacity by 50 billion kilograms (50 million tonnes) during 2009-2020*, reiterating the policy of 95 percent self-sufficiency in cereals. The Russian Federation announced in January 2010 a *Food Security Doctrine* with, *inter alia,* quantitative goals for minimum self-sufficiency, which is 95 percent for grains. In West Africa, many governments have launched new campaigns for rice production and new targets for self-sufficiency, in response to the global rice crisis. Benin, Cote d'Ivoire, Mali and Senegal have new national rice programmes geared towards self-sufficiency, or markedly raised targets, within the next four to five years. Elsewhere, Bangladesh, Indonesia and the Philippines have reiterated or announced self-sufficiency goals for rice. Malaysia also revised its rice self-sufficiency target to 86 percent from about 72 percent currently.

Some regional economic groups have responded similarly. In West Africa, the 2008 food crisis prompted a reformulation of the regional agricultural programme. In June 2008, Heads of State of the ECOWAS members held a summit in response to the food crisis and announced a programme of promoting regional food value chains (rice, maize and tubers) for attaining food sovereignty. The East African Community (EAC) is developing a similar strategy under its regional food security strategy.

Increased outlays on farm support and innovative schemes

Consistent with this shift in strategy, many governments around the world have announced new pledges as well as raised outlays on food production programmes. One of the immediate and conspicuous responses to the food crisis in 2007-08 was fuel and fertilizer subsidies, as well as seeds and farm credit. This was clearly visible in many countries in Africa, as well as elsewhere such as in Bangladesh. Innovative schemes, such as "smart subsidies" for fertilizers and public-private partnerships, are also being tested. In China,

outlays on grain production support programmes, direct income support as well as subsidies on seeds, machinery, fuel and fertilizers, increased by over four times between 2006 and 2010. Outlays on rice programmes have been raised significantly also in Malaysia. Encouraging production through support price schemes, with public procurement to defend that price, has been another important response. Where these schemes existed, support prices were raised markedly, such as in China and India, while new schemes were announced in some other countries.

These national commitments have been complemented by pledges of external assistance to agriculture at the high-level international summits and conferences, all in response to the food crisis. Overall, the food crisis and price spikes, and projections of high and volatile food prices, have had considerable influence on both the thinking and actions. There is thus a change in the perception that food production was underfunded in the past and countries ought to be making much more effort for developing this subsector.

Increased involvement of the public sector in food markets

While not many countries have sizable programmes on public procurement of food grains as part of a scheme to support farm price and maintain public reserves, recent trends, decisions and policy discussions all point towards increased market interventions. The likely impact of the increased role of the state in grain markets has accordingly been a lively policy issue for debates and analysis. In India, public procurement of cereals during the past four seasons has been historically high, averaging about 30 percent of the total output of rice and wheat, and markedly higher than the public reserve norms. India will most likely continue with large procurements in view of the projected needs for some 60–70 million tonnes of cereal to implement its new National Food Security Act from 2012 onwards. In China too, wheat procurement has increased and averaged about 35 percent of the total output in the past three years. In Ukraine and the Russian Federation, which are major exporters, public procurement as a share of total output remains historically low but recent discussions and some decisions point towards increased procurement in the coming years, for food security (containing bread prices) and, in the case of the Russian Federation, for supporting meat production. Also in the Russian Federation, new schemes such as grain collaterals and regional food funds for procurement are being discussed.

For the world rice market, the likely impact of the 2011 return to the Paddy Pledging Programme (PPP) in Thailand is being watched with keen interest. This will replace the Price Insurance Scheme (PIS) under which farmers received direct payments based on price gaps and did not involve public procurement. Depending on the pledging price set, the PPP will both increase public procurement and raise export price. In Africa, where there are very few schemes such as those in China and India, the main debate has been around the size and role of grain reserves, i.e. the level of the stocks and whether these would be used to stabilize market prices. For example, under its *Food Security Action Plan 2010-2015,* the EAC has proposed that its member countries increase their reserves considerably. Proposals such as these, including at the national level, have triggered fresh debate on the relationship between increased reserves on the one hand and the level of the market prices and their volatility on the other. The role of stocks versus trade in ensuring price stability and food security countries was also much debated in the 1970s and 1980s.

Varied ad hoc responses to contain the retail price of basic foods

One of the prominent challenges that many governments faced during the review period was containing consumer prices. This was more difficult where the consumer good happened to be processed products of the primary grains, such as breads and pasta, but even flour in some cases. Some governments that restricted cereal exports found that while grain prices were contained, prices for processed products were not. This prompted several responses towards directly regulating the markets such as through price caps and negotiating maximum prices. Middlepersons and processors were often blamed for lack of competition as well as hoarding and speculation. These experiences raised, once again, questions as well as debates on the functioning of the domestic food markets, and the role of the government.

As an illustration, the correlation between the price of grains and bread was noted to be relatively low in the Russian Federation, to the extent that when wheat prices started to decline from March 2011, bread prices continued rising. As a result, some actions were taken and some proposals floated. In February 2011, as domestic wheat prices were peaking, the Government helped bring three relevant unions (grain producers, millers and bakers) to negotiate minimum prices of milled wheat through July

2011. A suggestion also was made for establishing a list of socially significant products for capping retail price mark-ups at 15 percent over their wholesale price. In Ukraine, a list of "socially sensitive products" was drawn, which included all grains and some edible oils, for controlling retail prices and margins when needed. Both in China and India, some administrative measures were taken to prevent hoarding and speculation, including limiting participation in auction and futures markets. In Sri Lanka, the Government fixed maximum retail prices for a number of essential products such as rice, wheat flour, poultry and sugar. As the farm prices of some of these products were also administered, safeguarding both prices with limited instruments, such as tariff, became challenging. Fixing or capping the retail price of essential foods was also a common response in many countries in Africa. For example, in Cameroon, an agreement was struck in February 2010 among industry groups and wholesalers to freeze the prices and, in January 2011, the Government of Ethiopia set the maximum consumer prices for 17 basic foods including rice and bread.

Export restrictions being relaxed but the debate continues

As noted at the outset, about one-third of the surveyed countries had applied some form of export restriction during 2007–2011. These restrictions came in various forms: simple ordinary taxes (both *ad valorem* and specific), variable tax, differential taxes based on the stage of processing, Minimum Export Prices (MEPs), quotas and outright export bans. In several cases, various instruments were used in combination, both sequentially and concurrently, as policy-makers reacted to rapid changes in food prices at home and abroad. A typical sequence began with ordinary taxes, followed by quotas and then a full ban, with MEPs combined with taxes and quotas in some cases.

Export restrictions were lifted or relaxed generally following the end of the 2008 spikes, but some countries either continued the policy until after the end of the second spike in 2011 or are still maintaining the restrictions. Restrictions on food exports also have attracted a great deal of debate, both within restricting countries and globally. These debates have typically focussed on some aspects of the policy: impact on the global price spikes; effectiveness within countries in stabilizing consumer prices and impact on producers; impact on longer-term production and market development; and appropriateness of alternative instruments. These debates occur among various stakeholders such as industry groups (farm, processors and traders), consumer groups and the government, at times even among different ministries.

As an illustration of some of these policy developments and debates, the export bans on grains were fully lifted by the Russian Federation on 1 July 2011, with debates taking place on its impact on food inflation, which was high, and whether some modest levels of taxes may need to be imposed, including a scheme based on variable taxes. In Ukraine, export quotas were lifted on 1 July 2011 and replaced with export taxes, which were compound rates of *ad valorem* and specific taxes. These taxes were removed in October 2011 but discussions continue on reimposing the taxes if exports surge, creating shortage at home. Elsewhere, India has resumed exports of wheat and rice but under quota. In Viet Nam, the MEP continues to remain the main instrument for exporting rice, with the MEPs adjusted frequently. In many of these cases, domestic food price inflation remains the main concern, and thus the trigger, for adjusting export restricting measures.

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Review of changes in domestic cereal prices during the global price spikes

AMIS aims at improving the collection of statistics on various aspects of the national food economy and analyse them with a view to improving the policy process for containing excessive volatility. It is in this context that this first issue of the AMIS output includes an analysis of the national experiences on recent changes in domestic cereal prices.

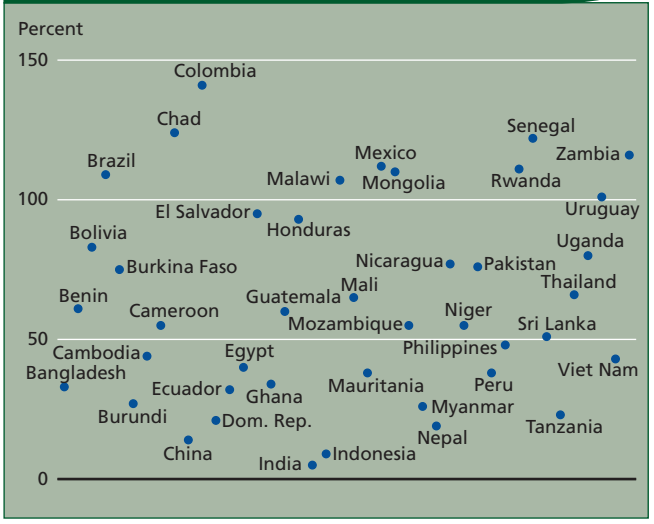
During the periods of global food crisis and price spikes that have occurred since mid-2007, there have been reports of widespread price rises across the world. Changes in domestic prices are determined by a number of factors, one of them being prices in the world markets. The strength of this relationship varies across countries and commodities depending on several factors, such as the level of self-sufficiency, natural barriers and policies that moderate the transmission. For example, domestic rice prices in Africa are often found to be more closely linked to the world price than domestic maize prices for the simple reason that the volume of maize imports in Africa is very small and so domestic output and other factors play the dominant role. A proper analysis of price transmission would use econometric techniques and include these factors, besides the changes in the world prices. Future AMIS information briefs should be based on such analysis. But the review below is mostly descriptive, essentially documenting how much cereal prices changed domestically. To demonstrate the order of the magnitude involved, these changes are expressed relative to the changes in the world market prices during the periods corresponding to the spikes, not necessarily implying transmission in the sense understood in the econometric literature on market integration. Thus, although the term "transmission rate" is used below, this is essentially a ratio of the change in the domestic price to that in the world price.

The review utilizes 155 series of domestic cereal prices cereal prices from 52 countries, maintained by the FAO Global Information and Early Warning System (GIEWS). It covers five periods when the spikes occurred in the world markets: three in 2007/08 consisting of one each for rice, wheat and maize; and two in 2010/11 consisting of one each for wheat and maize. The domestic data show that for most countries cereal prices did not stop rising when the spike ended in the world markets but continued to rise strongly for two to three months more, reflecting lagged transmissions. For this reason, two additional months are added for computing changes in the domestic prices.

Rice

Rice prices spiked from October 2007 to May 2008. Between these months, the price of Thai A1 super rose by USD 475/tonne (or 160 percent) and Thai 100% B by USD 625/tonne (or 185 percent). After receding to a low point in November 2008, rice prices essentially fluctuated until July 2011 around a mean that was markedly higher than during the pre-spike period. In the corresponding period (including two more months for domestic prices), domestic prices rose on average for the 42 countries covered from USD 605 to USD 910, i.e. by USD 305/tonne (or 50 percent), for a transmission rate of 64 percent (USD 305/475) using Thai A1 (and 49 percent using Thai 100% B). Figure 1 shows these rates for 42 countries, using the Thai A1 for the world price. In ten cases, transmissions exceeded 100 percent, i.e. domestic prices rose by more than the change in the world price, and in 15 other cases, the rates were in the 50–100 percent range. Transmissions were below 50 percent for the remaining 17 countries.

Figure 1: Rice transmission



Price rises in local currency (LC) terms were lower than in the United States Dollar terms for 23 of the 37 countries with both price series. In 15 of these 23 cases, price increases in the LC terms were lower by 10 percentage points or more than in the United States Dollar terms. For example, the price of rice in Brazil rose by 67 percent in United States Dollar terms and by 48 percent in LC terms, and in China by 20 percent in United States Dollar terms and 10 percent in LC terms, reflecting currency appreciation. On the other hand, LC prices rose more than the United States Dollar price in 11 cases, but markedly so only for Pakistan (144 percent versus 109 percent) and Ghana (32 percent versus 18 percent), reflecting currency depreciation.

As stated above, domestic prices were still rising beyond the May 2008 peak in the world market. Prices in July 2008 were higher than in May 2008 in 31 of the 42 countries, by USD 59/tonne on average for this sample. Lastly, by region, transmission rates were relatively lower for Asian countries (42 percent) than in Africa (70 percent) and Latin America (74 percent).

Wheat

Wheat had two spikes: from May 2007 to March 2008 and from June 2010 to February 2011. This analysis uses 56 price series from 26 countries, 27 for the first spike and 29 for the second. For each period, 12 series are for wheat grain and the rest for wheat flour. Although the two products are not identical, changes in the grain prices are expected to influence the flour prices strongly in the domestic markets. The two spikes are reviewed separately.

The first spike, May 2007 to March 2008

In this period, the world price (US #2 Hard Red Winter) increased from USD 203/tonne in May 2007 to USD 482/tonne by March 2008, a rise of USD 279/tonne (or 137 percent). Corresponding to this spike, and adding two more months for the domestic series, the average change in the price of *wheat grain* for 12 countries was USD 221 per tonne, which gives a transmission rate of 79 percent (USD 221/279), higher than the 63 percent for rice. Figure 2 shows these transmission rates. Transmission was lowest for both China and India, 11 percent for both, while, at the other extreme, it exceeded 100 percent for four countries (Bolivia, Egypt, Ethiopia and the Sudan). As with rice, price rises were lower in the LC terms than in the United States Dollar terms, by 17 percentage points on average.

As for *wheat flour*, the average price for 15 countries rose from USD 562 in May 2007 to USD 939 in May 2008. With this change of USD 377, the transmission rate was 135 percent (USD 377/279). Even counting only until March 2008, this rate was 108 percent on average. Figure 2 shows these rates for the covered countries. Nepal was an outlier, in that flour price fell by 11 percent. Transmission exceeded 100 percent for 10 of the remaining 14 countries, and

Figure 2: Wheat transmission - first spike

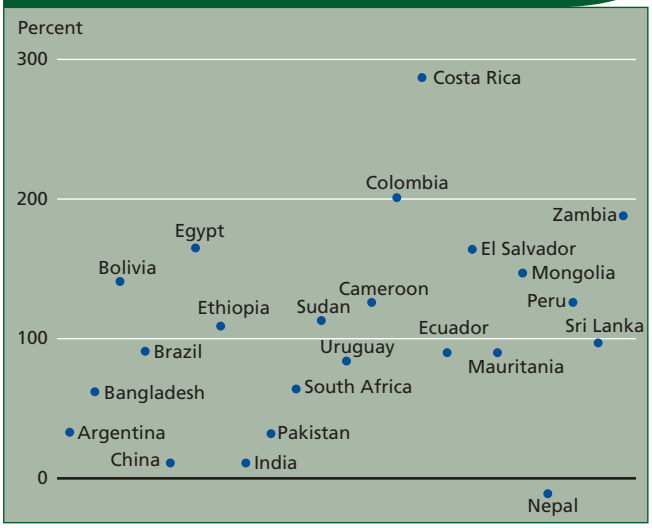
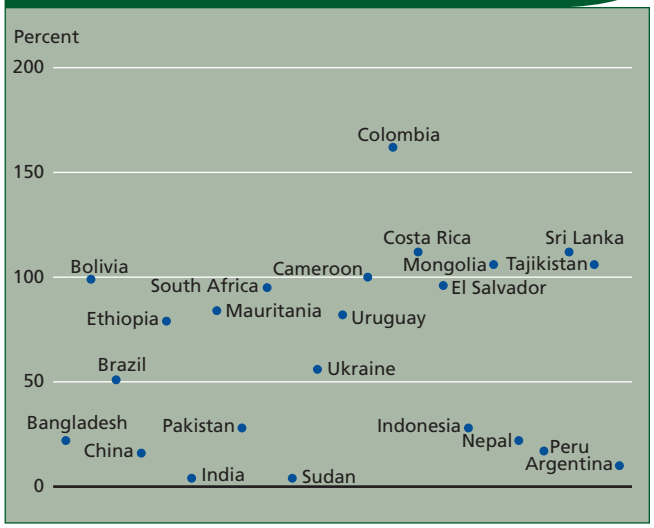


Figure 3: Wheat transmission - second spike



was between 50 to 100 percent for the three others. Price changes in the LC terms were lower than in the United States Dollar terms in most cases.

The second spike, June 2010 to February 2011

In this period, the world price increased from USD 183/tonne in June 2010 to USD 362/tonne by February 2011, a rise of USD 179/tonne (98 percent). The price dipped for a month and rose again in April 2011. For *wheat grain*, the average change in the domestic prices for the 12 countries with data (counting two additional months until April 2011) was USD 92 per tonne, which gives a transmission rate of 52 percent (compared with 79 percent in the first spike). Figure 3 shows the transmission rates. These were above 50 percent for seven of the 12 countries but not over 100 percent in any case, and were below 20 percent for Argentina, China, India and the Sudan. Besides being markedly lower than in the first spike, domestic prices did not generally continue to rise strongly after peak in the world price in February 2011.

As regards *wheat flour*, the change for 17 countries averaged USD 133/tonne, which implies a transmission rate of 74 percent (USD 133/179), substantially lower than the 135 percent for flour in the first spike. There were seven cases of the transmission exceeding 100 percent and four cases between 50 percent and 100 percent (Figure 3). The price changes in the LC terms were lower on average for the sample by about 10 percentage points than in United States Dollar terms.

And lastly, as with wheat grain, domestic prices did not continue to rise strongly after the peak in the world price in February 2011.

Maize

The first spike, July 2007 to June 2008

In this spike, the world maize prices (US #2 yellow) rose from USD 146/tonne in July 2007 to USD 281/tonne in June 2008, an increase of USD 135/tonne (92 percent). For domestic prices, the average change for 29 series was USD 146/tonne (adding two more months as above) and thus a transmission rate of 108 percent (USD 146/135). Figure 4 shows the variations for the 29 countries. For seven countries, the transmission rate exceeded 200 percent (Benin, Ethiopia, Malawi, the Niger, Nigeria, Peru and Togo) and for the other four the rate was between 100 percent and 200 percent (Cameroon, Chad, Kenya and Mozambique). Note a caveat mentioned earlier: for many countries in Africa in particular, studies on market integration have noted very weak price transmissions in the case of maize, explained mainly by small volumes traded and thus the dominant role played by domestic factors. The price rises for the African countries are unusually high and require in-depth analyses of the underlying reasons. It is also possible that there are problems with the domestic price data in some cases. Price changes in the LC terms are mostly lower but not by that much. Finally, by region, price transmission was 165 percent on average for 16 countries

Figure 4: Maize transmission - first spike

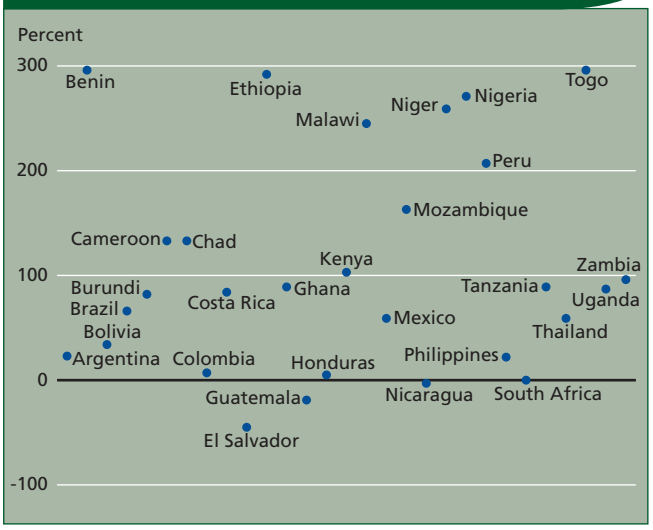
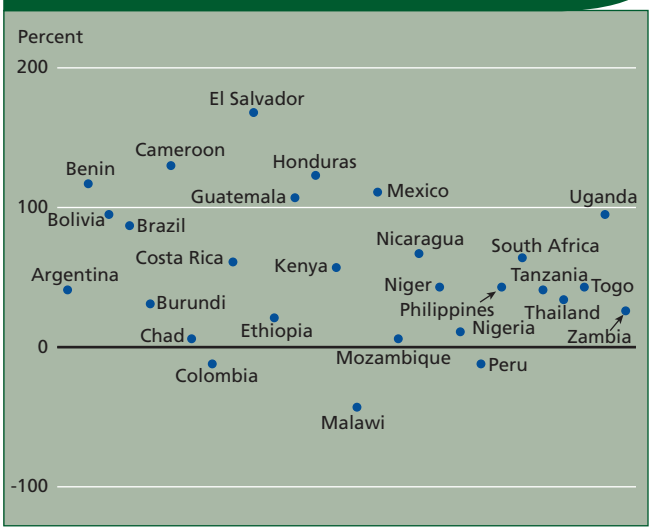


Figure 5: Maize transmission - second spike



in Africa, but only 62 percent on average for the 11 countries from Latin America.

The second spike, June 2010 to April 2011

In this period, world maize prices increased even more than those mentioned above, from USD 152/tonne to USD 314 or by USD 162/tonne. The domestic prices in 28 countries rose on average from USD 348/tonne to USD 438/tonne, or by USD 90/tonne, giving a transmission rate of 56 percent (USD 90/162). Figure 5 shows the variations. For six of them, the transmission exceeded 100 percent (Benin, Cameroon, El Salvador, Guatemala, Honduras, and Mexico), and was between 50 percent and 100 percent for the other seven. Price changes in the LC terms were lower than in the United States Dollar terms in 21 cases.

Summary

This review of price transmission for three cereals was based on 155 price series for 52 countries. The context was the spikes in the global cereal markets since mid-2007, although not necessarily inferring about market integration and price transmission, which will require a more sophisticated econometric analysis. On the whole, domestic prices rose significantly during the periods corresponding to the spikes in the world markets. Taking into account all 155 price series for both periods, domestic prices rose by more than the change in the world markets (over 100 percent transmission rate) in 48 of the 155 series, with transmissions of between 50 percent and 100 percent in 50 cases, and transmissions of less than 50 percent in 57 cases. The transmission rates were significantly lower during the second spike (2010/11). One obvious reason for this was increased food production in 2009, and most likely larger stocks moving into 2010. Better preparedness following the experience of 2007/08 might also have led to lower transmissions. With so many instances of transmissions exceeding 100 percent, and even 200 percent in many cases, these episodes deserve more focussed research with a view to understanding the role of policy and non-policy (e.g. weather) factors in exacerbating the transmission, or in moderating the price rises. Econometric analysis of market integration and price transmission should also be on the agenda. Lastly, learning best practices on policy from the 2007–11 experiences across the world is one way to prepare better for future spikes.

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Special features

A NEW FOOD ASSISTANCE CONVENTION IMMINENT

(Article by C. Stuart Clark, Chair of the Trans-Atlantic Food Assistance Dialogue and Senior Policy Advisor at the Canadian Foodgrains Bank and Jennifer Clapp, Professor, Balsillie School of International Affairs, University of Waterloo and author of "Hunger in the Balance: the New Politics of International Food Aid (Cornell University Press, 2012)

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

INTRODUCTION AND BACKGROUND

The Food Aid Convention (FAC) is an international treaty among eight donors[1] that defines global rules for assistance. First put into place in 1967 as part of a broader International Grains Agreement under the General Agreement on Tariffs and Trade, the FAC is unique in that it is the only international legal agreement that requires members to provide a minimum amount of food aid. In its early days food aid was principally provided out of massive donor country food surpluses that were a product of the post-World War II era. Food aid was seen not just as a tool for humanitarian assistance, but also as a trade concern because the distribution of those surpluses in the form of aid had the potential to disrupt commercial trade. In addition to requiring donors to provide a minimum amount of food aid, the FAC aims to ensure that the aid provides genuine benefits for recipients while minimizing disruptions to commercial food trade.

The FAC has been updated periodically over the years in order to respond to changing conditions facing both donor and recipient countries as well as the broader international food security context. Last updated in 1999, member states are closing in on a new agreement set to be adopted in 2012. Much has changed in the global food system during the past decade and these changes are likely to be reflected in the new agreement. These changes will go far beyond the predicted name change, from a "Food Aid Convention" to a "Food Assistance Convention".

[1] The eight signatories to the FAC are Australia, Argentina, Canada, the European Union, Japan, Norway, Switzerland and the United States.

PRESSURES FOR CHANGE

Pressure for further changes to the FAC began almost as soon as the 1999 treaty was ratified and it intensified during the decade that followed. These pressures came from both the member states themselves or from the actual use of food aid in the field. Accommodation to these changes was delayed throughout the decade by food aid controversies at the World Trade Organization, where new rules were being negotiated on the use of food aid as part of the Doha Round.

For some of the member states, those that had already untied their food aid or were in the process of doing so (European Union, Australia and Canada), the continued use of the 'wheat equivalent' counting system for commitments was becoming increasingly awkward, requiring highly technical calculations that had nothing to do with the actual use of the resources provided. More importantly, these calculations made it almost impossible to track realization of their commitments except long after the fact.

The treaty also applied some important limitations on 'countable' activities, notably restrictions on the counting of micronutrient supplementation and fortification and financial assistance provided to the food aid activities of non-FAC states, so-called twinning.

Meanwhile, developments in the field began to take food aid farther and farther from the straight transfer of food surplus commodities to various activities in developing countries. The proportion of food aid utilized in emergency situations continued to rise, going from 30% in 1999 to 80% today – often with much higher distributional costs. With the increased untying of food aid, the food commodities used were increasingly being purchased locally or in the region opening the potential for additional benefits to agricultural development.

And the growing awareness of the importance of the nutritional quality of the food provided, particularly to pregnant women and young children, prompted the development of highly effective special nutrient and calorie dense foods whose high cost was difficult to reconcile with FAC counting systems.

Finally, in some cases the nature of the transfer itself changed with the use of vouchers for food or direct cash being given to people to procure their own food.

The growing divorce between the 1999 FAC and the actual practice of food aid, now more accurately termed food assistance, threatened to render the FAC completely irrelevant. Furthermore, the apparent shift from predictable global grain surpluses to a less stable situation began to

roil all aspects of the food system resulting in high price volatility. So great were the difficulties that the high stakes debates over food aid in the Doha Round WTO negotiations were set aside and the decision taken in June 2010 to renegotiate the treaty.

OPTIONS FOR CHANGE

The nature and counting of commitments is the central focus of changes being considered. One of the distinguishing features of the FAC has been its commitments by member states to provide an amount of food, almost regardless of the price involved. From the point of view of the recipient, this is particularly important given the increasing incidence of price spikes and high volatility. However, for donors, most of whom now contribute cash rather than commodities, the budgeting uncertainties are difficult. Cash commitments are much easier to manage. But who is to bear the risk of price volatility? If it is not going to be those who are most vulnerable and the donors are unwilling, is there anyone else to manage this risk?

The second major issue is the 'toolbox' – what kind of activities will count against FAC commitments. There seems to be a strong consensus that direct transfers in the form of food, cash or vouchers should all be permitted. However, there is debate about what kind and amounts of 'transitional resources' – seeds, fertilizers, livestock, etc. should be included. Similarly, micronutrients, particularly if delivered with other foods, are widely supported but there may be questions about whether and how to count more 'medicine' type transfers (micronutrient supplements and ready to use therapeutic foods (RUTF)).

The third area where changes to the FAC are being considered is its governance. This has not been significantly altered since the treaty's formation in 1967. The secretariat of the FAC is currently housed in the International Grains Council in London, reflecting the treaty's early trade orientation. With food aid increasingly serving emergency food security needs rather than simply being an outlet for surpluses, it is important to connect the FAC to new global forums for food security policy. As a donor-only agreement, the FAC to date has been closed in its deliberations, with little opportunity for input from other key stakeholders including recipient countries and civil society organizations. A stronger link with the newly reformed UN Committee on World Food Security (CFS) could help to remedy this deficiency.

Full details of the new draft treaty could become available as soon as the end of 2011.

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FERTILIZERS

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

THE NITROGEN MARKET

Granular urea prices are up from lows of USD220/t as at mid-June 2010 to range from USD450-510/t, based on spot Middle East prices (fob basis). The recovery was mainly driven by stable import demand from India and Latin America, as well as production cutbacks by China, Romania, Libya and, more recently, Pakistan. However, even high-cost urea producers are generating healthy returns, so new, low-cost, supply due from Qatar (2.6mtpa of urea) and Algeria (1.2mtpa of urea) over the coming six months are likely to affect urea prices adversely.

The big question is whether production cuts in China and Pakistan caused by limited natural gas supply would be sizeable enough to keep the urea merchant market tight, offsetting new sales output from Qatar and Algeria. HSBC thinks not – particularly as new supply will be lower cost than the displaced capacity. However, reduced production in China and Pakistan will set a higher floor for international urea prices, and we therefore raise our 2012 urea selling price estimate from USD350/t to USD400/t.

STRONG IMPORT DEMAND

In India, the world's largest urea importer, reports continue to circulate in the local press about fears of urea shortages in a number of states during the upcoming Rabi season (October – December planting period for winter wheat). The importer is looking to secure 800,000 tonnes for the current session by the Department of Fertilizers (DoF), and offers were in excess of 1m tonnes.

The government is under pressure to speed up imports to meet agricultural output targets, but is also separately working on its long-term target of becoming self-sufficient in nitrogen. HSBC estimates urea imports for the Indian agricultural year of 2010 at 5.5m tonnes, 17% higher than 2009, which was affected by a very poor monsoon. Domestic production during 2011 was stagnant, at approximately 21m tonnes, and the Indian government met increased domestic consumption needs by increasing imports to 6.6m tonnes, up 20% y-o-y.

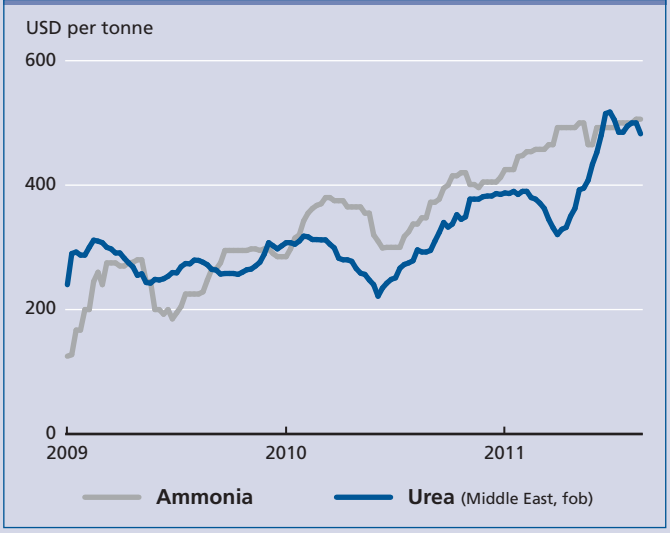
While Brazil remains a relatively small importer of urea in aggregate, the country's import demand has been growing strongly. Between January and July 2011, urea imports stood at 1.4mt, close to 40% more than for the same period last

Table 1. Brazil fertilizer imports (000 tonnes)

	Jan-Jul 2010	Jan-Jul 2011	% y-o-y
AS	876	989	12.9
AN	300	460	53.3
Urea	984	1 370	39.2
MAP	555	1 075	93.7
DAP	273	351	28.6

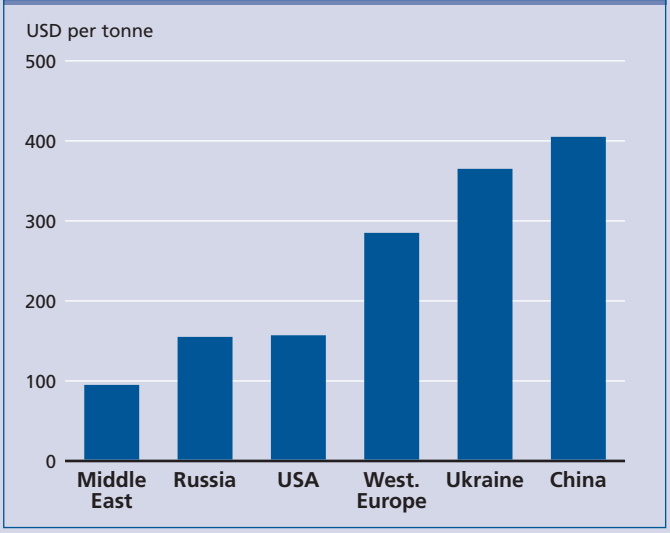
Source: ANDA, Siacesp, *Fertilizer Week*

Figure 1. Nitrogen fertilizer prices



Source: Fertilizer Week

Figure 2. Urea production costs in 2012

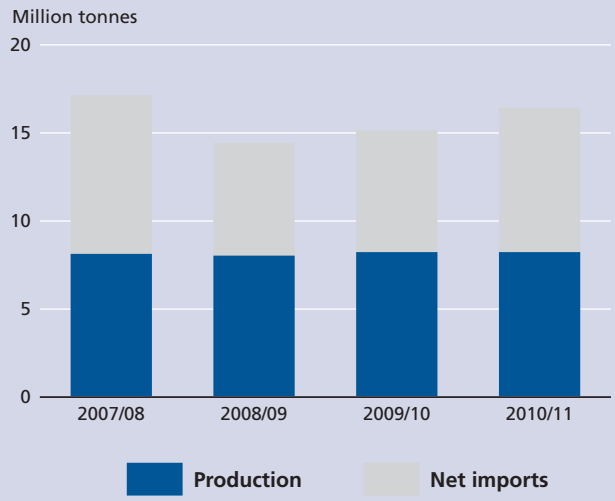


Source: *Fertilizer week*, HSBC estimates

year, thanks to higher demand for sugar cane, coffee and cotton crops. Latin American buying activity, led by Brazil, seasonally peaks in September and is set to slow during Q4 2011, as the majority of demand has been covered. Latin American buying interest should support Baltic prices for urea in the short to medium term.

Operating rates in the US and Western Europe were already at peak at the start of 2011, and incremental demand over the year has been met through increased imports. The US imported 9% more than last year, and Western Europe, 9% more.

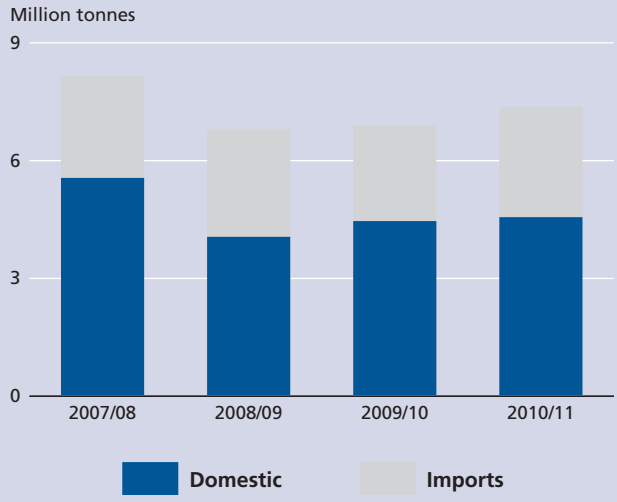
Figure 3. US nitrogen fertilizer deliveries



Note: Total nitrogen deliveries estimates in USA based on TFI US trade commission, Blue-Johnson.

Source: Yara estimates for fertilizer delivery to selected W.european countries

Figure 4. Western Europe nitrogen fertilizer deliveries



Source: Yara estimates for fertilizer delivery to selected W.european countries

NITROGEN MARKETS TIGHTEN ON PRODUCTION CUTBACKS

We continue to estimate that demand will grow by 3.6% y-o-y in 2011. The main supply-side reductions came from China, but aside from lower production levels there – which we discuss in more detail later on – levels in 2011 have also been affected by the shutdown of Lifeco in Libya as a result of the political turmoil in that country. Lifeco is a complex with capacity of 0.9mtpa of urea and 0.8mtpa of ammonia.

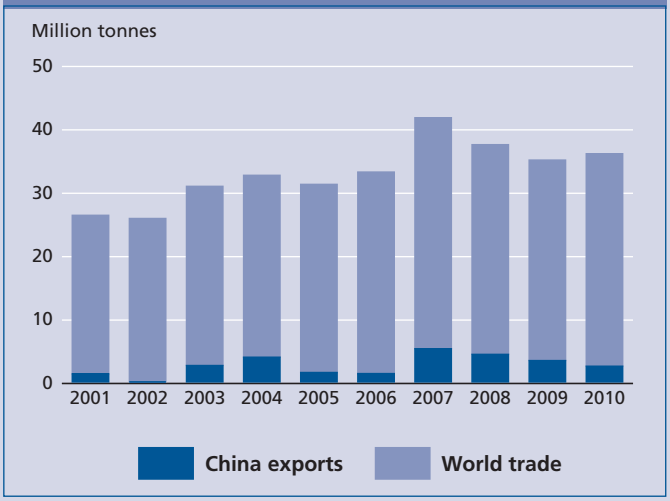
The Black Sea market has also been particularly tight owing to urea plant closures in Romania (Interagro's Slobozia and Turnu Magurele plants) earlier this year. More recently, supply cuts have also occurred in Pakistan as a result of a 27% reduction in the domestic natural gas supply from the SNGPL natural gas network to four regional urea units, including Engro's new 1.3mtpa plant. Outages are set to continue through to early 2012. Gas curtailments are also likely from the Maari gas network, with indications of a 12% cutback in Q4 2011, according to *Fertilizer Week*. The output cut is significant and could create the need for 1.25mt of urea imports between September 2011 and March 2012, with 850,000 tonnes required for the last four months of 2011.

The big question is whether these supply cutbacks are sustainable and sufficient to offset the new supply due to come on stream from Sorfert in Algeria (0.8mtpa of ammonia, 1.2mtpa of urea) and QAFCO V in Qatar (2.6mtpa of urea) later this year.

CHINA'S SHARE OF GLOBAL TRADE SHOULD DROP

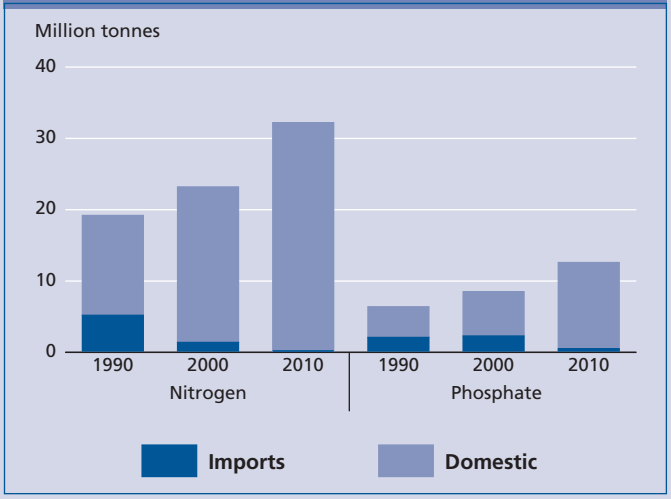
Logistical problems at China's main ports, inconsistent energy supply and the government's focus on emission control have combined to leave urea in short supply. Chinese urea output has been on a consistent downtrend since early 2010 and capacity utilisation fell as low as 67% in Q1 2011 after the government shut down a number of plants. Industry estimates for the total amount of reduced supply range from 3m to 5m tonnes. India is the single largest importer of urea in the world and the swing factor has been China, as shown below. Lower exports out of China should therefore be highly supportive for the price. Over the course of 2011 Chinese urea producers have begun to reinstate plants, in part because a few had achieved their emission control targets, but also helped by more stable natural gas supply from the government and stronger urea prices.

Figure 5. China urea exports relative to world trade



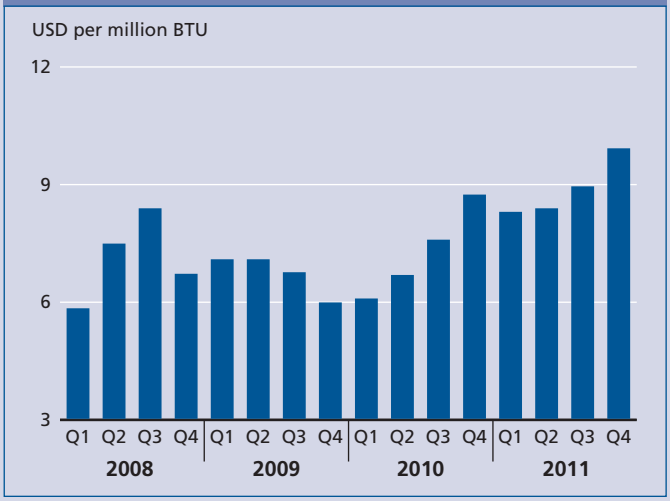
Source: IFA, *Fertilizer Week*

Figure 6. China's fertilizer consumption profile



Source: Fertecon, PotashCorp, HSBC

Figure 7. Ukraine: natural gas prices to nitrogen producers



Source: *Fertilizer Week*, Profency, HSBC

We now believe operating rates across the country's urea market are close to 80%, although gas-based plants are still operating below 65-70% of rated capacity.

China has historically (2000-09) operated at 90% of capacity, which allowed it to export an average of 2.5mt a year although the level had risen to as much as 7m tonnes in 2010 as new supply projects had come on stream last year. *Fertilizer Week* has estimated H2 2011 exports at 4.2mt, implying close to 5mt for calendar year 2011. Thus China's share of global trade to continues to fall. The country's existing gas supply is unreliable, and the government is unlikely to continue importing gas for urea use. Further consolidation should also displace high-cost plants. The Chinese urea supply market is highly fragmented, with the top 15 producers of nitrogen fertilizer representing less than 6% of the country's total nitrogen production capacity, and government efforts to encourage consolidation among fertilizer producers have been largely ineffective. One of the reasons for this fragmentation is the water supply shortage, which limits plant size to 520,000-800,000 tonnes per annum. That said, increased P&L earnings pressure has recently led to consolidation in the sector, where the number of players has fallen approximately 30% from a year ago. The government is targeting a further 30% reduction to 250 plants as part of its 12th five-year plan which ends in 2014.

All in all, the Chinese government's increasingly restrictive export tax policy reflects both the need to ensure the domestic availability of urea for food security reasons, and the government's desire to discourage re-exports of energy-intensive products.

MARGINAL COST OF UREA RISING

HSBC sees the average 2011 urea price at USD375/t, averaging USD400/t in 2012, with a 2013 and long-term estimate of USD350/t. These forecasts are more exposed to upside than downside risk because urea production economics are likely to deteriorate further for marginal producers in Ukraine and China. Given oil-linked natural gas contracts in the Former Soviet Union, the cost of marginal production in Ukraine should increase.

Ukraine's Minister of Energy and Mines has said that imported gas prices could rise from USD290/000 cbm in Q1 2011 to USD293 in Q2, USD313 in Q3 and USD347 in Q4 2011. This implies that Ukrainian gas costs will be closer to USD10/mmbtu by the end of the year, suggesting a urea production cost of USD350/t. This assumes that the Russian government does not adjust the structure of the existing Ukrainian gas supply contracts.

Table 2. China urea exports by month

	Year				% y-o-y	
(000 t)	2008	2009	2010	2011	2011/10	2010/09
					%	%
January	1 225	153	402	346	-14	163
February	488	381	558	196	-65	47
March	573	75	240	54	-78	221
April	725	45	170	42	-75	274
May	533	26	84	19	-77	220
June	232	14	84	23	-73	521
July	136	186	309	280	-9	67
August	187	364	645	492	24	77
September	166	802	1 197			49
October	23	290	385			33
November	35	542	1 444			166
December	37	501	1 506			201
YTD/Total	**4 360**	**3 379**	**7 026**	**1 452**		**108**

Source: *Fertilizer Week*

Table 3. Nitrate versus urea price premiums, nitrogen-content adjusted

	Ammonium nitrate (AN)	Urea ammonium nitrate (UAN)	Calcium ammonium nitrate (CAN)
	%	%	%
2000	-35.5	-13.0	9.7
2001	-22.8	-6.0	53.9
2002	-9.0	-18.5	68.2
2003	-31.6	-26.7	19.7
2004	-20.7	-13.3	3.2
2005	-22.6	-7.7	15.3
2006	-19.8	-9.3	30.0
2007	-9.2	12.6	8.5
2008	-11.4	2.6	59.3
2009	-13.8	-8.3	47.3
2010	1.0	5.8	35.9
2011	-4.2	5.4	51.8
2000-11 average	**-16.6**	**-6.4**	**33.6**

Source: ICIS, *Fertilizer Week*, HSBC

Table 4. HSBC urea, ammonia and nitrate fertilizer price estimates

USD/t (fob)	2011e	2012e	2013e
Urea	375	400	350
Ammonia	430	400	400
Nitrates			
CAN			
Premium %	70	60	40
Nitrogen content %	27	27	27
Implied CAN price (EUR/t)	265	268	205
UAN			
Premium %	20	15	0
Nitrogen content %	32	32	32
Implied UAN price (USD/t)	315	320	243
AN			
Premium %	10	5	-5
Nitrogen content %	36	36	36
Implied AN price (USD/t)	323	329	260

Source: FW, HSBC estimates

NITRATES MARKETS

HSBC calculates nitrate prices using the average 10-year historical premium or discount for each product compared with urea, adjusting for tight market conditions. In the year to date, cold weather, low European nitrate stocks and producer pricing power have led to a strong rally in nitrate prices.

Adjusting for the nitrogen content of each product, CAN has historically traded at a 32% premium to urea – although in 2010 and in the year to date, the premium has been 50% or more. HSBC looks for a 70% premium in 2011 on

the back of low inventories – in line with 2007/08 levels for Europe – as well as strong prices for wheat and barley, the most important European grains, which suggests healthy farmer margins.

Nitrate premiums should fall in 2012 and beyond, levelling off close to historical average premiums at -5% for AN, 0% for UAN and 40% for CAN by 2013.

THE PHOSPHATES MARKET

CURRENT DAP PRICING ENVIRONMENT UNSUSTAINABLE

Di-ammonium phosphate (DAP) prices have risen more than expected year to date. This was not just due to the rising cost of inputs, mainly phosphate rock, but more importantly because of record-high growth in India's annual imports, in tandem with lower-than-expected exports from China. DAP prices have risen 10% this year and the first export shipments from Maaden's 3m tpa DAP plant have been transacted at these high spot prices (USD590-600/t, fob).

Going into 2012, however, HSBC believes DAP prices will fall and we look for USD465/t, compared to current international spot prices of USD670-700/t There are two reasons for this view. First, the strong phosphate rock and DAP margins that leading producers currently enjoy are unsustainable because when low-cost capacity from Saudi Arabia is fully ramped up, supply in the merchant market will increase by as much as 25%. The recent 2-3 month delay in the full commercial production start-up of Maaden's plant to Q1 2012, does not change our view of the DAP supply/demand balance in 2012.

Second, HSBC believes import demand from India during 2011 will be a record high. Should India's domestic DAP output return to 2010 levels, implying a 15% rise in production next year, it will require a smaller share of global DAP imports, adding to the global DAP oversupply situation.

INDIA DAP IMPORT DEMAND

We monitor key import markets to assess the supply/demand dynamics for DAP. India and Latin America are the two main DAP import markets. However, Latin America is likely to be supplied by Brazil through Vale, while India is likely to remain a significant importer of DAP as it lacks domestic access to the main input, phosphate rock.

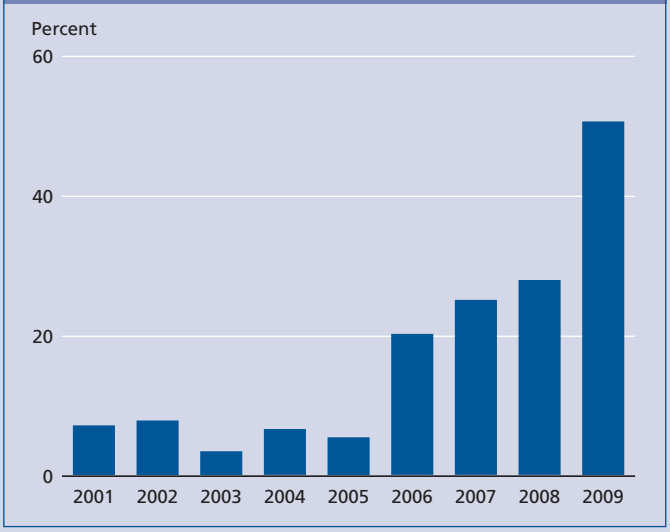
India, which accounts for more than 50% of total imports globally, saw domestic DAP production was down more than 15% y-o-y to 3.5m tonnes in the agricultural year ending March 2011. As a result, its share of the import

Table 5. Phosphoric acid global supply/demand

Year	2011	2012	2013	2014	2015
Supply					
Capacity	51.4	52.9	54.9	56.6	57.6
Total supply	42.1	44.0	45.0	46.4	47.8
Demand					
Fertilizer demand	34.3	35.4	36.3	37.2	38.0
Non-fertilizer use	5.6	5.9	6.0	6.1	6.0
Distribution losses	0.8	0.8	0.8	0.9	0.9
Total demand	**40.7**	**42.1**	**43.1**	**44.2**	**44.9**
Potential balance	**1.4**	**1.9**	**1.9**	**2.2**	**2.9**
% of supply	**3**	**4**	**4**	**5**	**6**

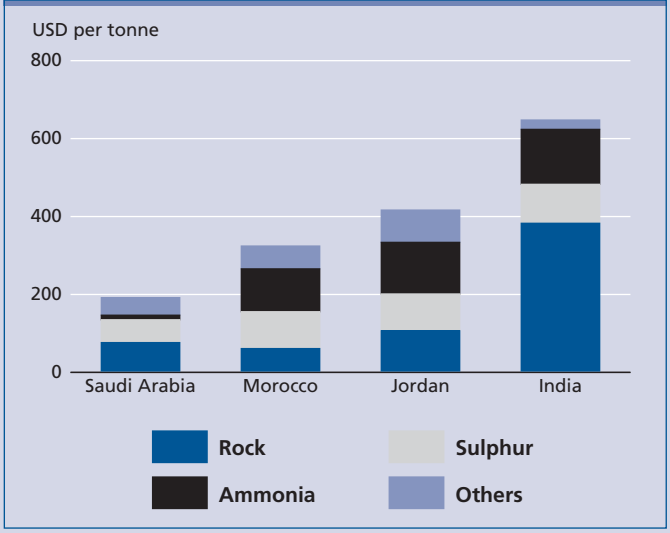
Source: IFA, May 2011

Figure 8. India's DAP imports relative to total DAP trade



Source: India Department of Fertilizers

Figure 9. 2011e DAP production costs



Source: HSBC estimates

Table 5. China: DAP exports

	(000 tonnes)					China's DAP export tax policy	
	2008	2009	2010	2011	% y-o-y	2011	%
January	215	165	115	145	26	January	110
February	101	341	62	64	4	February	110
March	62	100	79	70	-12	March	110
April	52	35	51	13	-73	April	110
May	77	4	37	17	-53	May	110
June	133	137	404	332	-18	June	7
July	38	273	747	546	-27	July	7
August	1	263	769	939	22	August	7
September	33	273	524		n/a	September	7
October	3	68	325		n/a	October	110
November	28	260	468		n/a	November	110
December	75	155	408		n/a	December	110
Total	**817**	**2 074**	**3 988**	**2 127**			

Source: *Fertilizer Week*

market increased to meet local demand. DAP production in India declined again in April 2011 to approximately 262,600 tonnes, down by a third from April 2010 production levels because manufacturing of NPK has taken precedence as a result of the country's newly introduced subsidy reform. Although in May 2011 production rose to 353,600 tonnes, year-to-date production is still down over 10%. India's signed contracts as at the end of May 2011 were for a total of 1.3m tonnes of DAP, at prices ahead of USD575/t (fob) and in total HSBC expects India to import over 6.2m tonnes in 2011 (or 8m tonnes for the Indian agricultural year ending March 2012), supporting DAP prices. Also, India holds low inventory positions, totalling only 70,210 tonnes as at May 2011.

India's agricultural sector is heavily reliant on monsoon rain owing to the poor irrigation network. As a result, the key downside risk is a poor monsoon season, with not enough rain. However, the Indian Meteorological Department (IMD) is forecasting a normal monsoon this year, which suggests good demand prospects for the Kharif (summer cropping) season.

CHINA'S EXPORT TAX REGIME

Producers in China are likely to enjoy optimal operating rates this year (80%-90%), based on contractual commitments with India. However, power restrictions and high sulphur prices could result in output running at below 80% of capacity at some production sites in China, lowering the volume of DAP available for export which would represent an upside risk to HSBC's DAP price estimates.

Effective from 1 June 2011, China's export tax rate fell to 7% from the 110% which had prevailed since October last year. The tariff is to be applied to the floor price for DAP set by the government of RMB3,882/t (USD600/t, fob). China's progressive DAP export programme could reach around 2.8m-2.9m tonnes during the four-month trading window which runs until the end of September 2011.

MAADEN UP AND RUNNING IN Q1 2012

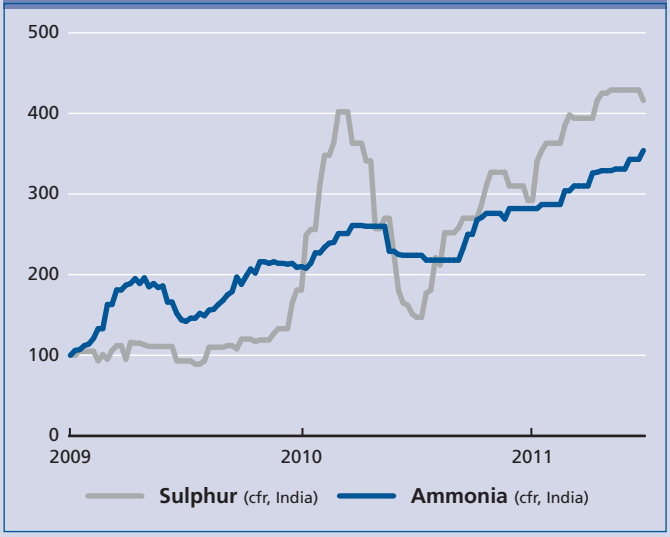
Maaden announced on 18 June 2011 that it had started production trials at its USD5.5bn Ras Az Zawr 3m tpa DAP complex. Commercial DAP production followed in early August 2011 and we expect a gradual ramp-up of commercial DAP exports, mostly to India. *Fertilizer Week* had recorded export orders placed with Maaden for delivery from August to December 2011 that total 430,000 tonnes, and a total of 600,000 tonnes through to March 2012. However, on 29 September 2011, the company issued a press release that it will delay the commercial ramp up of its DAP production plant by approximately 2-3 months to Q1 2012.

RISING INPUT COSTS

Export supply contracts to India set the floor for DAP pricing, because Indian producers are at a disadvantage in cost structure. The bulk of production in India comes from non-integrated DAP plants, which must import phosphate rock, ammonia and sulphur that they then convert into DAP fertilizer.

Producing one tonne of fertilizer requires 1.7 tonnes of rock, 0.44 tonnes of sulphur and 0.22 tonnes of ammonia. Prices for these three inputs have increased faster than expected in the year to date. Contracts for phosphate rock, which accounts for 63% of production costs in India in

Figure 10. Sulphur and ammonia prices (Jan 2009 = rebased to 100)



Source: *Fertilizer Week*, HSBC

2011, are now ranging from USD190-205/t (depending on the acid content in the rock), compared with USD130-140/t six months ago. This is attributable to the pricing power of OCP of Morocco, which controls over 40% of world trade. The top 12 markets together account for close to 95% of total world rock production.

Sulphur and ammonia are traded in a spot market, and prices are up by 42% and 25%, respectively, since January 2011.

DAP PRICE FORECASTS

From 1987 to 2007 phosphate rock prices ranged between USD30/t and USD50/t (69%-72% BPL acid-grade), with an average price of USD38/t. In 2007, prices began to rise and surged to all time highs of up to USD400/t in 2008, as Morocco's main state-owned producer, OCP, was able to capitalise on its 45% global market share and push prices higher. While we do not think Morocco's natural global industry leadership is likely to change, HSBC's 2012 and long-term phosphate rock price estimates are USD100/t,

Table 6. Sample of Maaden DAP commercial export shipments 2011 (000 tonnes)

Date	Customer	Country	Quantity ('000 tonnes)	Price ($/t, FOB RAS Az Zawr)	Shipment period
May -11	Zuari	India	200	590-597	August 2011-March 2012
July -11	IPL & IFFCO	India	400	590-597	August 2011-March 2012
Total			**600**		

Source: *Fertilizer Week*

Table 7. HSBC DAP price estimates

(USD/t)	2007	2008	2009	2010	2011e	2012e
Input price assumptions						
Rock	69	280	100	130	175	100
Sulphur	521	573	30	162	215	215
Ammonia	530	517	245	350	430	400
Input conversion rates						
Rock (x)	1.77	1.77	1.77	1.77	1.77	1.77
Sulphur (x)	0.44	0.44	0.44	0.44	0.44	0.44
Ammonia (x)	0.22	0.22	0.22	0.22	0.22	0.22
Freight to India	42	42	25	38	39	41
DAP cash cost of typical non-integrated Indian producer						
Rock	122	548	177	297	379	249
Sulphur	229	283	13	71	95	95
Ammonia	117	169	54	85	103	97
Other	25	26	22	23	24	25
DAP Indian cash cost	**493**	**1 025**	**266**	**477**	**600**	**465**
% y-o-y		**108.0**	**-74.0**	**79.3**	**25.8**	**-22.5**

Source: FW, HSBC estimates

notably lower than spot prices today, for two main reasons. First are OCP's supply expansion plans, which could be significant in size. The second reason is that OCP also profits from selling DAP, not just rock, to India, its main customer. Saudi-based Maaden is geographically better positioned to supply the Indian market than a company in Morocco. To maintain its Indian DAP market share with in the face of this competition, OCP may well lower its rock prices, and in turn DAP prices, to maintain its current sales volume.

Freight indicators imply that the landed cost of DAP fertilizer exports from Saudi Arabia to India are USD15/t cheaper than exports to India from Morocco, where OCP, the world's largest DAP exporter is located.

For ammonia, which is the second-largest key input cost for DAP, HSBC's price estimate is USD430/t for 2011, and our 2012 and long-term assumption is USD400/t. Our estimates are conservative compared with the current spot price of USD575/t (Middle East hub, fob); because of the many other industrial uses of ammonia, its price has historically been highly volatile.

The third major raw material is sulphur. The main importers are China and India, supplied from the Middle East and Canada. According to *Fertilizer Week*, 30 June 2011, sulphur prices are USD215/t, based on spot Middle East prices.

That leads to forecasted DAP prices of USD600/t for 2011 and USD465/t for 2012 onwards. HSBC's 2012 rock export price estimate of USD100/t, though down over 40% y-o-y, would still represent a higher trough than past lows. Note, the recent 2-3 month delay in the full commercial production start-up of Maaden's plant to Q1 2012, does not change our view of the DAP supply / demand balance in 2012.

THE POTASH MARKET

Demand for potash remains strong, continuing its upward trend from last year. Although the 2010 trend may have reflected a rebound from low usage in 2009, this year's volumes represent a secular increase in demand from farmers who find it worthwhile to use more of the fertilizer. HSBC estimates the 2011 potash market volume at 58.0mt, up from 56.6mt previously. Greater volumes are pushing up industry utilisation rates and product is becoming scarce. That has led to price increases of cUSD75-85/t this year – with spot topping out at USD550/t – and gives good visibility on 2012 pricing.

RAISING 2011 VOLUME FORECAST

China

Chinese potash demand is high. This was the first year it used six-month instead of full-year purchase contracts and, while past negotiations have dragged on, the H2 2011 contract was closed quickly. Suppliers were even asked to increase the pace of deliveries after the agreement. *Fertilizer Week* reports that domestically produced potash stocks amount to c1.8mt and port inventories are c800kt. That is less than the total 3.0-4.5mt of stock China held in 2009 and is not a cause for concern at this point.

India

Extended price negotiations delayed India's 2011 supply contract for three months. Occurring as it did at a time of heavy demand, this delay pushed up prices to around

Table 8. Estimated global potash volumes, mt, 2009-11e

	2009 volume	2010 Delta	2010 volume	2011 Delta	2011e volume
		%		%	
Asia					
China	6.6	40	7.6	35	10.2
India	4.5	25	5.6	-10	5.1
SE Asia	2.4	110	5.5	15	6.3
Total Asia	13.4	47	18.6	16	21.5
Latam	3.5	125	8.6	20	10.4
Europe	2.5	70	5.6	10	6.2
N America	3.8	113	10.0	5	10.5
Other	4.8	50	8.5	10	9.4
Total volume	**28.0**		**51.4**		**58.0**
% change			**83.9**		**12.7**

Source:

Table 9. HSBC potash price forecasts USD/d

	Europe	Brazil	SE Asia	USA	India	China
H2 2011e	500	550	535	600	490	470
2012e	530	570	550	600	530	500

Source: HSBC estimates

Table 10. India potash imports, kt, 2011-12

	Quantity	Optional
BPC (Russia/Belarus)	2 110	
Israel Chemicals (Israel)	1 390	125
Canpotex (Canada)	670	70
APC (Jordan)	575	25
IPC (Russia)	400	
K&S (Germany)	200	
Total	**5 345**	**220**

Source: *Fertilizer Week*. Contract from August 2011 to March 2012, except Canpotex at October 2011 to March 2012, and IPC from August 2011 to December 2012

Table 11. Brazil potash imports, kt, 2007-11

	2007	2008	2009	2010	2011
January	368	517	68	288	449
February	388	513	28	289	365
March	617	238	8	363	437
April	484	430	81	574	815
May	565	1017	174	417	790
June	611	682	349	367	730
July	594	703	490	695	830
August	828	809	500	426	
September	508	736	693	609	
October	807	621	537	936	
November	474	309	284	692	
December	518	174	234	467	
Total	**6 762**	**6 751**	**3 447**	**6 124**	**4 417**
H1	**3 033**	**3 398**	**708**	**2 299**	**3 587**
YTD	**3 627**	**4 101**	**1 198**	**2 995**	**4 417**
Vs H1 2011 %	18	6	407	56	
Vs YTD 2011 %	22	8	269	47	

Source: *Fertilizer Week*

USD490/t on average for deliveries until March 2012. Spot prices in March/April had been about USD450/t, so India could have achieved a price of USD420/t had it signed earlier.

Brazil

Brazilian potash demand is high. *Fertilizer Week* data show imports are up for both the year to date and for H1 2011 in relation to the peak purchasing years of 2007 and 2008. So far this year, imports have risen 22% from 2007 and 8% from 2008 levels. Prices have risen from USD420/t at end-2010 to USD550/t now. BPC has announced a price increase to USD580/t for Q4 2011, but as of yet there is no indication this has been accepted by Latin American buyers.

PRICING OUTLOOK

Overall, HSBC expects potash prices to be stable and transparent until the end of 2012. This is underpinned by a tight supply of crops, strong demand for potash and higher capacity utilisation.

In the short term, companies like Potash Corp, Arab Potash, Israel Chemicals and K+S are indicating their volumes are fully committed for the rest of the year. This sold-out status means the potash market should remain tight through 2011.

Updating forecasts

For 2011, HSBC continues to forecast European potash prices at USD500/t, while projecting USD550/t in Brazil and USD535/t in South-east Asia. Importers into the US should get USD600/t.

Tight potash supply underpins expectations for next year's prices: assuming that demand increases by the historical average, 3%, from 57.9mt to 59.7mt, and that all announced capacity expansions are completed on time, the industry-wide utilisation rate would need to be 85.5% to balance the market. However, only one major group – the Canpotex consortium – will be adding enough new capacity to supply marginal new demand. Approximately 65% of the 4.9mt in global new capacity planned for next year will come from two of its joint owners, Potash Corp and Mosaic, and the only other major project scheduled for completion is Uralkali's 1.5mt expansion, which will only be ready from mid-year. This concentration of new production gives Canpotex bargaining power with buyers who are looking for more product.

We therefore look for higher spot prices, but keep our 2012 estimates conservative, predicting levels of USD530/t for Europe, USD570/t for Brazil and USD550/t South-

East Asia, while importers into the US should continue to receiveUSD600/t. (Pricing in the US market, and to some extent offshore spot as well, hinges on possible changes in the mandated used of corn ethanol, as well a US government subsidies to corn ethanol producers.) For contract, we assume a China price of USD500/t for the full year and assume that India maintains USD530/t for its 2012-13 contract as well. That averages out at an annual price of about USD540/t for a benchmark producer two-thirds exposed to spot markets and one-third to contract sales.

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Statistical appendix tables

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.

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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 70 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 1 855 in 2008). 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		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**972.8**	**1 008.9**	**1 054.3**	**132.9**	**139.4**	**142.9**	**44.3**	**45.1**	**47.4**
Bangladesh	32.7	35.6	36.8	3.5	5.5	3.7	-	-	-
China	414.9	436.9	449.9	9.9	12.4	16.4	2.0	0.8	1.1
India	211.4	216.2	228.6	0.8	0.5	0.2	5.0	6.4	8.2
Indonesia	53.9	60.2	60.8	6.5	9.6	9.7	0.8	1.6	1.6
Iran, Islamic Republic of	17.9	19.7	20.0	9.5	6.2	6.0	0.9	0.5	0.2
Iraq	2.7	2.6	2.4	4.2	4.5	5.0	-	-	-
Japan	8.9	8.7	8.5	25.3	25.1	25.4	0.5	0.5	0.5
Kazakhstan	18.6	11.8	26.1	0.1	0.1	-	8.1	5.8	7.5
Korea, Republic of	5.0	4.7	4.5	12.2	13.5	12.4	0.1	0.1	0.1
Myanmar	21.0	21.0	20.5	0.1	0.2	0.2	0.8	0.8	0.8
Pakistan	33.3	32.1	34.8	1.6	0.3	0.2	4.2	3.9	4.0
Philippines	17.6	17.3	18.0	5.3	4.8	5.4	-	-	-
Saudi Arabia	2.3	1.7	1.6	11.2	11.1	12.1	-	-	-
Thailand	25.6	26.9	25.5	2.0	2.9	2.7	10.0	10.9	9.1
Turkey	30.4	32.4	34.8	4.0	4.1	3.3	2.8	3.2	3.8
Viet Nam	29.7	31.3	32.8	2.7	4.8	4.5	5.9	7.2	7.3
AFRICA	**141.5**	**160.3**	**157.9**	**61.9**	**64.4**	**64.6**	**6.2**	**7.2**	**7.6**
Algeria	3.4	4.7	4.7	7.8	8.4	8.0	-	-	-
Egypt	20.8	18.8	21.0	14.2	15.8	16.0	0.5	0.1	0.1
Ethiopia	15.4	17.4	15.4	1.6	0.5	1.2	0.3	0.5	0.2
Morocco	6.1	7.8	9.0	5.4	6.4	5.3	0.2	0.2	0.2
Nigeria	23.2	24.8	24.7	5.6	6.5	6.6	0.5	0.6	0.6
South Africa	13.0	15.3	13.6	2.5	2.7	2.7	1.8	2.4	2.2
Sudan	4.8	5.6	5.1	2.0	1.8	2.1	0.2	-	-
CENTRAL AMERICA	**40.2**	**41.4**	**39.6**	**24.7**	**25.1**	**25.3**	**1.6**	**1.2**	**1.0**
Mexico	33.9	34.9	32.7	14.7	14.5	15.1	1.3	1.0	0.9
SOUTH AMERICA	**129.4**	**142.6**	**144.2**	**24.4**	**25.2**	**25.9**	**36.6**	**46.5**	**45.6**
Argentina	35.3	45.6	45.2	-	-	-	23.2	26.7	28.8
Brazil	69.4	72.2	73.1	8.6	8.0	8.5	9.4	15.2	11.8
Chile	3.2	3.4	3.5	2.9	3.0	3.0	0.1	0.1	0.1
Colombia	3.7	3.2	3.4	4.8	5.3	5.3	0.1	0.1	0.1
Peru	3.8	3.9	3.7	3.2	3.7	3.6	-	-	-
Venezuela	3.7	3.5	3.6	3.0	3.5	3.8	0.1	-	-
NORTH AMERICA	**461.3**	**443.8**	**432.8**	**9.2**	**7.8**	**8.0**	**112.1**	**110.2**	**94.7**
Canada	51.2	45.6	45.6	2.8	1.8	1.9	21.7	19.9	20.8
United States of America	410.1	398.2	387.3	6.4	6.0	6.0	90.3	90.3	74.0
EUROPE	**451.6**	**403.6**	**455.8**	**21.7**	**18.2**	**16.4**	**60.7**	**48.7**	**64.6**
European Union	290.5	279.5	287.8	17.3	14.1	12.6	24.0	28.5	18.9
Russian Federation	94.0	59.7	89.5	0.8	0.8	0.6	19.1	4.9	21.1
Serbia	8.2	9.2	8.7	0.1	0.1	0.1	1.5	1.9	1.8
Ukraine	42.5	38.4	50.9	0.3	0.2	0.1	15.9	13.0	22.2
OCEANIA	**32.1**	**40.8**	**40.4**	**1.3**	**1.4**	**1.4**	**16.0**	**23.2**	**23.5**
Australia	31.2	39.9	39.5	0.2	0.1	0.1	16.0	23.2	23.5
WORLD	**2 229.0**	**2 241.3**	**2 325.1**	**276.1**	**281.6**	**284.5**	**277.5**	**282.1**	**284.5**
Developing countries	1 229.3	1 303.6	1 334.0	207.7	217.9	222.3	77.9	90.8	91.0
Developed countries	999.6	937.7	991.2	68.4	63.7	62.2	199.6	191.2	193.5
LIFDCs	513.3	543.5	556.5	78.6	81.7	84.2	16.1	18.6	21.0
LDCs	115.3	84.2	78.1	23.8	24.0	24.0	5.0	5.8	6.3

Table A1 (b). Cereal statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**1 047.6**	**1 098.3**	**1 124.6**	**277.2**	**301.4**	**325.2**	**161.2**	**162.1**	**162.7**
Bangladesh	35.5	38.9	40.1	6.5	9.9	10.2	170.3	179.7	182.4
China	417.1	441.7	454.2	158.2	177.5	188.6	152.8	152.0	151.1
India	203.4	210.3	215.5	40.9	40.2	44.7	153.4	154.0	154.9
Indonesia	58.7	65.2	67.7	7.4	10.6	11.3	208.1	212.5	216.0
Iran, Islamic Republic of	25.9	26.8	26.6	4.6	3.9	3.1	198.8	197.1	197.6
Iraq	7.0	7.2	7.3	0.6	0.6	0.7	188.6	189.5	191.4
Japan	33.9	33.4	33.4	4.7	4.9	4.8	130.5	129.5	129.1
Kazakhstan	10.2	9.2	9.4	3.2	0.7	10.0	162.8	165.4	166.2
Korea, Republic of	16.7	18.1	17.0	3.3	4.1	4.2	127.0	125.0	125.4
Myanmar	20.4	20.9	20.8	5.6	5.0	4.1	249.1	254.3	254.0
Pakistan	30.1	29.8	30.9	3.6	2.7	2.9	152.0	145.9	150.8
Philippines	22.2	22.9	23.6	4.1	4.1	4.0	161.7	162.3	164.4
Saudi Arabia	13.6	13.0	13.8	3.5	3.4	3.3	147.7	141.7	143.0
Thailand	17.1	18.4	19.0	5.4	6.7	6.9	143.7	150.9	150.9
Turkey	32.6	33.3	34.1	4.5	4.2	4.5	223.0	224.8	222.2
Viet Nam	26.9	28.9	29.5	5.6	5.1	5.6	206.5	213.8	215.1
AFRICA	**196.7**	**214.6**	**216.6**	**30.5**	**37.7**	**36.3**	**147.8**	**151.1**	**150.7**
Algeria	11.6	13.1	13.3	3.2	3.9	3.6	226.1	233.9	233.1
Egypt	33.6	34.8	35.9	5.3	6.8	7.7	267.2	267.1	268.2
Ethiopia	16.3	17.4	17.2	1.4	2.0	1.2	167.7	169.0	168.1
Morocco	11.7	13.4	14.0	2.2	3.5	3.7	242.6	246.3	246.7
Nigeria	28.4	30.7	30.8	1.4	1.7	1.6	140.8	144.1	142.8
South Africa	13.8	15.2	13.8	2.4	3.2	3.3	171.6	175.7	166.7
Sudan	6.9	7.4	7.5	2.0	1.5	1.2	140.6	142.1	142.0
CENTRAL AMERICA	**63.7**	**64.4**	**64.5**	**5.3**	**5.6**	**5.2**	**166.2**	**166.8**	**166.7**
Mexico	47.5	47.7	47.5	3.3	3.6	3.3	202.6	202.8	202.4
SOUTH AMERICA	**114.5**	**121.2**	**123.7**	**19.4**	**19.6**	**20.0**	**121.7**	**122.0**	**122.0**
Argentina	12.5	14.6	15.8	4.5	5.5	6.1	133.1	131.9	133.8
Brazil	65.9	68.8	69.3	7.8	7.2	7.3	115.4	115.3	114.7
Chile	6.1	6.3	6.5	0.7	0.6	0.6	151.6	151.6	151.6
Colombia	8.4	8.9	8.9	2.2	1.9	1.7	108.1	107.1	106.6
Peru	6.8	7.4	7.4	1.2	1.4	1.4	140.5	143.7	143.8
Venezuela	6.6	6.9	7.3	0.8	0.7	0.8	131.0	134.7	136.2
NORTH AMERICA	**347.1**	**361.2**	**357.5**	**77.1**	**68.1**	**57.3**	**110.4**	**109.9**	**108.9**
Canada	29.4	27.7	28.2	11.7	10.8	8.8	101.2	95.6	96.5
United States of America	317.7	333.6	329.3	65.4	57.3	48.4	111.4	111.4	110.2
EUROPE	**403.8**	**395.8**	**403.1**	**62.0**	**48.6**	**52.6**	**140.5**	**140.9**	**141.4**
European Union	281.0	278.5	282.0	38.5	28.5	27.5	134.3	136.0	136.6
Russian Federation	70.7	64.0	66.9	12.7	10.2	12.3	150.0	146.8	147.6
Serbia	6.7	7.5	7.6	1.5	1.4	0.7	164.5	164.0	163.7
Ukraine	26.0	26.1	26.6	6.6	6.2	8.5	177.1	175.9	175.6
OCEANIA	**16.8**	**17.1**	**18.5**	**7.1**	**9.4**	**10.0**	**91.4**	**92.0**	**92.0**
Australia	14.8	15.0	16.3	6.7	8.9	9.5	102.0	102.1	102.9
WORLD	**2 190.3**	**2 272.7**	**2 308.6**	**478.7**	**490.4**	**506.6**	**152.0**	**153.0**	**153.3**
Developing countries	1 343.0	1 419.6	1 451.1	318.1	350.6	363.8	156.6	157.8	158.3
Developed countries	847.2	853.2	857.4	160.5	139.8	142.8	133.5	133.7	133.3
LIFDCs	567.4	601.3	615.1	96.1	108.2	111.8	156.0	157.9	159.1
LDCs	156.1	170.2	172.6	28.7	35.9	32.7	145.7	150.6	151.3

Table A2 (a). Wheat statistics

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**286.2**	**289.1**	**308.0**	**56.8**	**58.0**	**59.9**	**14.9**	**12.6**	**15.0**
Bangladesh	0.8	1.0	1.0	2.7	4.0	3.0	-	-	-
China	112.3	115.2	116.8	2.3	2.5	3.7	0.6	0.2	0.2
of which Taiwan Prov.	-	-	-	1.2	1.2	1.2	-	-	-
India	78.4	80.8	84.3	0.7	0.3	0.1	0.1	0.3	0.9
Indonesia	-	-	-	5.3	6.0	6.5	-	-	-
Iran, Islamic Republic of	12.6	13.5	13.5	4.0	1.2	1.3	0.9	0.5	0.2
Iraq	1.7	1.9	1.7	3.1	3.2	3.6	-	-	-
Japan	0.8	0.8	0.8	5.2	5.6	5.5	0.3	0.3	0.3
Kazakhstan	15.4	9.6	22.2	-	-	-	7.5	5.5	7.2
Korea, Republic of	-	-	-	3.6	4.9	5.0	0.1	0.1	0.1
Pakistan	22.8	23.3	24.2	1.6	0.2	0.2	1.2	1.2	1.0
Philippines	-	-	-	2.8	3.2	3.3	-	-	-
Saudi Arabia	1.8	1.3	1.1	1.1	1.7	2.0	-	-	-
Thailand	-	-	-	1.3	1.9	1.7	0.1	0.2	0.2
Turkey	18.5	19.7	21.8	2.9	3.3	2.5	2.6	3.0	3.5
AFRICA	**21.6**	**21.7**	**25.6**	**35.9**	**37.8**	**37.3**	**1.1**	**0.9**	**0.9**
Algeria	2.1	3.1	3.1	5.5	5.8	5.5	-	-	-
Egypt	8.0	7.2	8.4	9.2	10.1	10.0	-	-	-
Ethiopia	2.8	3.0	2.7	1.3	0.5	1.2	-	-	-
Morocco	3.9	4.9	6.3	3.4	4.0	3.0	0.2	0.2	0.2
Nigeria	0.1	0.1	0.1	3.6	4.1	4.2	0.2	0.2	0.2
South Africa	2.0	1.4	1.9	1.3	1.6	1.6	0.2	0.2	0.2
Tunisia	1.3	0.8	1.8	1.9	2.0	1.7	0.2	0.1	0.1
CENTRAL AMERICA	**4.0**	**3.7**	**4.1**	**6.9**	**7.4**	**7.4**	**1.1**	**0.9**	**0.8**
Cuba	-	-	-	0.8	0.8	0.8	-	-	-
Mexico	3.9	3.7	4.0	3.2	3.5	3.6	1.0	0.8	0.8
SOUTH AMERICA	**20.3**	**25.5**	**23.0**	**12.8**	**12.9**	**13.0**	**9.4**	**11.8**	**10.9**
Argentina	11.2	14.7	13.0	-	-	-	7.6	7.6	8.0
Brazil	5.0	6.0	5.1	6.6	6.4	6.7	0.8	2.5	1.0
Chile	1.3	1.6	1.6	0.8	0.8	0.7	-	-	-
Colombia	-	-	-	1.4	1.4	1.4	-	-	-
Peru	0.2	0.2	0.2	1.5	1.7	1.6	-	-	-
Venezuela	-	-	-	1.5	1.7	1.7	-	-	-
NORTH AMERICA	**86.6**	**83.2**	**78.8**	**2.8**	**3.1**	**3.0**	**45.7**	**50.8**	**43.0**
Canada	25.2	23.2	24.2	0.1	0.2	-	17.4	15.9	17.0
United States of America	61.4	60.1	54.7	2.7	3.0	3.0	28.3	34.9	26.0
EUROPE	**222.0**	**201.9**	**225.1**	**8.9**	**6.7**	**9.6**	**43.4**	**30.3**	**42.4**
European Union	136.4	136.9	138.6	6.5	4.7	7.5	19.1	21.9	14.5
Russian Federation	58.3	41.5	57.0	0.2	-	0.1	16.1	4.2	18.5
Ukraine	20.2	17.0	22.5	0.1	-	-	7.7	3.7	9.0
OCEANIA	**19.1**	**26.6**	**26.5**	**0.6**	**0.8**	**0.7**	**11.6**	**18.2**	**18.0**
Australia	18.8	26.3	26.2	-	-	-	11.6	18.2	18.0
WORLD	**659.7**	**651.8**	**691.0**	**124.7**	**126.8**	**131.0**	**127.2**	**125.5**	**131.0**
Developing countries	302.5	316.8	324.5	99.6	102.7	104.0	18.1	19.8	19.5
Developed countries	357.2	335.0	366.5	25.2	24.1	27.0	109.1	105.7	111.5
LIFDCs	135.3	139.2	142.7	49.3	48.8	51.2	2.3	2.3	2.8
LDCs	10.4	11.3	10.1	14.7	14.1	14.7	0.2	0.1	0.1

Table A2 (b). Wheat statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**324.7**	**337.6**	**344.9**	**92.8**	**98.6**	**105.1**	**64.4**	**65.0**	**65.0**
Bangladesh	3.1	3.8	3.8	1.3	3.3	3.5	18.4	22.0	21.3
China	114.5	117.6	121.2	47.5	50.5	49.7	65.2	64.2	63.4
of which Taiwan Prov.	1.2	1.2	1.2	0.3	0.4	0.4	46.6	47.3	47.2
India	77.3	81.9	83.4	19.0	18.5	18.0	59.7	61.6	61.8
Indonesia	5.1	5.3	5.4	2.4	2.8	2.9	19.2	19.4	19.6
Iran, Islamic Republic of	15.3	15.4	15.5	3.4	3.0	2.1	165.5	165.2	164.5
Iraq	4.8	5.2	5.3	0.5	0.6	0.6	142.8	143.0	142.9
Japan	5.8	5.9	5.9	0.6	0.7	0.8	41.5	41.9	41.5
Kazakhstan	7.5	6.9	6.9	2.7	0.6	8.8	147.8	149.6	150.0
Korea, Republic of	3.5	4.9	4.7	0.4	0.7	1.1	48.5	48.5	49.3
Pakistan	22.9	23.0	23.4	1.7	1.4	1.4	126.8	123.0	125.9
Philippines	2.7	3.2	3.3	0.5	0.6	0.6	25.7	27.7	28.3
Saudi Arabia	2.9	2.8	2.9	1.4	1.9	2.2	104.5	98.7	98.2
Thailand	1.2	1.6	1.5	0.2	0.4	0.4	12.6	15.3	15.2
Turkey	19.1	19.8	20.4	2.1	2.3	2.7	197.5	198.1	195.7
AFRICA	**55.8**	**59.6**	**61.8**	**13.6**	**15.7**	**16.2**	**49.7**	**49.9**	**49.9**
Algeria	7.9	8.6	8.9	2.4	3.0	2.9	204.0	211.7	211.3
Egypt	16.5	17.3	17.8	3.2	4.7	5.3	182.0	182.4	183.4
Ethiopia	3.8	3.9	4.0	0.5	0.6	0.4	38.7	39.1	39.6
Morocco	7.5	8.3	8.9	1.4	2.0	2.2	189.3	191.5	192.2
Nigeria	3.3	4.0	4.1	0.5	0.7	0.7	18.7	20.6	20.7
South Africa	3.0	3.0	3.1	0.6	0.5	0.6	58.3	56.4	56.8
Tunisia	2.9	3.0	3.1	1.3	1.0	1.3	215.7	216.9	216.7
CENTRAL AMERICA	**10.0**	**10.2**	**10.3**	**1.0**	**1.1**	**1.3**	**45.6**	**45.6**	**45.5**
Cuba	0.8	0.8	0.8	-	-	-	57.6	57.3	57.3
Mexico	6.4	6.4	6.5	0.5	0.5	0.8	50.7	50.6	50.6
SOUTH AMERICA	**24.5**	**25.4**	**25.7**	**5.5**	**5.1**	**5.1**	**59.6**	**59.9**	**59.9**
Argentina	4.8	5.0	5.1	2.4	1.9	2.3	116.6	116.8	116.9
Brazil	10.6	10.9	10.9	1.1	0.9	0.7	52.0	52.5	52.0
Chile	2.2	2.3	2.3	0.2	0.3	0.2	121.2	121.3	121.3
Colombia	1.3	1.3	1.4	0.2	0.2	0.2	27.3	27.0	27.8
Peru	1.7	1.8	1.8	0.4	0.5	0.5	56.4	56.6	56.7
Venezuela	1.6	1.7	1.7	0.3	0.2	0.2	56.3	56.2	57.0
NORTH AMERICA	**38.5**	**38.4**	**40.3**	**23.8**	**30.7**	**28.9**	**81.6**	**79.7**	**79.8**
Canada	7.2	7.7	8.3	6.3	7.2	6.1	84.5	79.7	80.4
United States of America	31.3	30.7	32.1	17.6	23.5	22.8	81.3	79.7	79.8
EUROPE	**182.0**	**187.6**	**190.0**	**29.9**	**25.3**	**27.1**	**112.9**	**113.8**	**113.9**
European Union	123.0	124.1	128.6	16.0	11.0	13.5	111.1	112.2	112.4
Russian Federation	38.3	42.4	40.3	8.7	9.4	7.7	115.1	115.2	115.1
Ukraine	12.3	12.8	12.7	3.3	3.7	4.5	125.8	127.7	127.5
OCEANIA	**7.7**	**8.6**	**9.0**	**4.5**	**5.4**	**6.1**	**69.3**	**69.0**	**68.7**
Australia	6.7	7.6	8.0	4.2	5.0	5.7	82.7	82.7	82.8
WORLD	**643.3**	**667.4**	**681.9**	**171.0**	**181.9**	**189.7**	**67.5**	**67.8**	**67.7**
Developing countries	381.6	400.3	409.6	105.4	114.2	113.0	59.9	60.4	60.3
Developed countries	261.6	267.0	272.3	65.6	67.6	76.6	97.8	97.8	97.8
LIFDCs	177.9	187.2	190.7	40.4	45.2	44.1	53.1	54.1	54.4
LDCs	23.7	25.5	25.9	7.1	9.4	8.4	25.4	26.7	26.7

Table A3 (a). Coarse grain statistics

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**277.4**	**297.9**	**310.2**	**61.8**	**64.7**	**66.9**	**5.8**	**6.1**	**6.1**
China	170.7	186.6	193.9	6.7	8.4	11.6	0.6	0.2	0.1
of which Taiwan Prov.	0.1	0.1	0.1	4.5	4.8	4.8	-	-	-
India	38.1	40.1	41.4	-	0.1	0.1	2.3	2.6	2.3
Indonesia	15.7	18.4	17.9	0.7	1.9	2.0	0.8	1.6	1.6
Iran, Islamic Republic of	3.8	4.7	5.0	4.3	3.8	3.4	-	-	-
Japan	0.2	0.2	0.2	19.4	18.8	19.2	-	-	-
Korea, D.P.R.	1.7	1.7	1.8	0.3	0.8	0.5	-	-	-
Korea, Republic of	0.3	0.4	0.3	8.3	8.3	7.1	-	-	-
Malaysia	-	-	-	2.7	2.7	2.8	-	-	-
Pakistan	4.0	3.9	4.1	-	-	-	-	-	-
Philippines	6.9	6.4	7.3	0.3	0.4	0.3	-	-	-
Saudi Arabia	0.4	0.5	0.5	9.0	8.2	8.9	-	-	-
Thailand	4.4	4.1	4.4	0.4	0.6	0.6	0.7	0.4	0.7
Turkey	11.4	12.2	12.5	0.8	0.6	0.5	0.2	0.2	0.3
Viet Nam	4.4	4.7	4.8	1.0	1.6	1.7	-	-	-
AFRICA	**104.5**	**122.0**	**115.3**	**16.3**	**16.0**	**16.8**	**4.6**	**6.1**	**6.4**
Algeria	1.3	1.6	1.6	2.3	2.6	2.5	-	-	-
Egypt	8.3	8.0	8.6	5.0	5.6	5.9	-	-	-
Ethiopia	12.6	14.2	12.6	0.3	-	0.1	0.3	0.5	0.2
Kenya	2.8	3.2	3.0	1.0	0.4	1.1	-	-	-
Morocco	2.1	2.8	2.7	2.1	2.4	2.3	-	-	-
Nigeria	20.8	22.3	22.1	0.1	0.2	0.2	0.3	0.4	0.4
South Africa	11.0	13.9	11.7	0.4	0.1	0.2	1.6	2.2	2.0
Sudan	4.2	5.3	4.6	0.4	0.3	0.5	0.2	-	-
Tanzania, United Rep. of	4.5	4.7	4.3	0.1	0.1	0.1	0.1	0.1	-
CENTRAL AMERICA	**34.5**	**35.8**	**33.6**	**15.7**	**15.5**	**15.7**	**0.4**	**0.2**	**0.1**
Mexico	29.8	31.1	28.5	10.8	10.3	10.9	0.3	0.2	0.1
SOUTH AMERICA	**92.9**	**101.3**	**103.4**	**10.5**	**10.9**	**11.4**	**24.9**	**31.5**	**32.1**
Argentina	23.3	30.0	31.0	-	-	-	15.2	18.5	20.3
Brazil	56.4	58.3	58.9	1.4	0.9	1.0	8.1	11.5	10.0
Chile	1.8	1.8	1.8	1.9	2.1	2.2	0.1	0.1	0.1
Colombia	1.8	1.5	1.6	3.4	3.9	3.9	-	-	-
Peru	1.7	1.8	1.7	1.6	1.8	1.8	-	-	-
Venezuela	2.8	2.8	2.8	1.4	1.5	1.8	-	-	-
NORTH AMERICA	**368.1**	**353.0**	**348.0**	**5.4**	**3.8**	**3.9**	**63.0**	**56.1**	**48.7**
Canada	26.0	22.4	21.4	2.4	1.3	1.5	4.3	3.9	3.8
United States of America	342.1	330.6	326.6	3.0	2.5	2.4	58.6	52.2	44.9
EUROPE	**227.3**	**199.0**	**227.9**	**11.1**	**9.8**	**5.1**	**17.1**	**17.8**	**21.6**
European Union	152.4	140.7	147.3	9.5	8.2	3.8	4.8	6.2	4.1
Russian Federation	35.1	17.5	31.7	0.4	0.6	0.3	2.9	0.4	2.3
Serbia	6.1	7.6	6.9	-	-	-	1.1	1.6	1.6
Ukraine	22.1	21.3	28.3	-	0.1	-	8.2	9.3	13.2
OCEANIA	**12.9**	**14.0**	**13.4**	**0.2**	**0.2**	**0.2**	**4.3**	**4.7**	**5.0**
Australia	12.4	13.5	12.8	-	-	-	4.3	4.7	5.0
WORLD	**1 117.7**	**1 122.9**	**1 151.8**	**121.0**	**120.9**	**120.0**	**120.0**	**122.6**	**120.0**
Developing countries	492.7	538.9	544.5	82.5	86.0	89.6	33.4	41.5	42.4
Developed countries	625.1	584.0	607.3	38.5	34.9	30.4	86.6	81.1	77.6
LIFDCs	167.3	185.3	183.1	14.5	15.9	16.8	6.4	8.6	8.7
LDCs	60.4	72.0	67.4	2.8	2.3	2.7	2.9	3.7	4.1

Table A3 (b). Coarse grain statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**331.9**	**355.2**	**364.2**	**67.1**	**70.9**	**77.6**	**15.2**	**15.3**	**15.2**
China	175.3	192.9	200.4	46.5	51.4	56.3	10.5	10.9	10.9
of which Taiwan Prov.	4.8	4.9	4.8	0.5	0.3	0.3	7.0	7.0	7.0
India	35.8	36.9	37.8	2.8	2.4	3.7	21.0	20.8	20.7
Indonesia	15.5	18.0	18.4	1.4	2.4	2.4	31.8	31.5	31.5
Iran, Islamic Republic of	7.9	8.8	8.4	1.0	0.7	0.7	1.4	1.4	1.3
Japan	19.7	19.5	19.6	1.8	1.6	1.4	29.2	29.3	29.3
Korea, D.P.R.	2.1	2.5	2.3	-	0.1	0.1	70.2	85.2	78.6
Korea, Republic of	8.5	8.5	7.7	1.9	2.0	1.7	4.4	4.4	4.3
Malaysia	2.7	2.9	2.9	0.3	0.3	0.1	1.7	1.7	1.6
Pakistan	4.0	4.0	4.1	1.1	1.0	1.0	9.9	9.5	9.2
Philippines	7.1	7.3	7.5	0.9	0.5	0.6	16.2	14.8	15.4
Saudi Arabia	9.6	9.2	9.8	1.9	1.4	1.0	3.8	3.7	3.6
Thailand	4.2	4.3	4.3	0.2	0.2	0.2	2.8	2.7	2.7
Turkey	12.8	12.7	12.9	2.4	1.8	1.7	16.9	16.9	16.7
Viet Nam	5.4	6.1	6.2	1.1	1.2	1.5	7.1	7.1	7.4
AFRICA	**116.6**	**128.4**	**127.3**	**14.0**	**19.0**	**17.3**	**76.8**	**79.1**	**78.2**
Algeria	3.6	4.4	4.3	0.8	0.9	0.7	20.0	20.0	19.7
Egypt	13.3	13.7	14.2	0.8	0.9	1.2	46.8	46.6	45.8
Ethiopia	12.4	13.5	13.1	1.0	1.4	0.8	128.2	128.9	127.5
Kenya	3.9	4.1	4.2	1.3	0.8	0.8	88.7	89.0	88.8
Morocco	4.2	5.1	5.0	0.8	1.5	1.5	52.3	53.9	53.5
Nigeria	20.8	22.0	21.9	0.6	0.7	0.7	97.4	97.8	96.3
South Africa	9.9	11.4	9.9	1.8	2.7	2.6	96.4	103.5	92.8
Sudan	4.9	5.2	5.2	0.6	0.4	0.3	92.1	90.9	90.9
Tanzania, United Rep. of	4.4	4.6	4.6	0.6	0.6	0.4	89.3	87.6	87.4
CENTRAL AMERICA	**49.9**	**50.2**	**50.1**	**4.0**	**4.1**	**3.5**	**101.8**	**101.9**	**101.6**
Mexico	40.3	40.4	40.2	2.8	3.1	2.5	144.9	144.9	144.7
SOUTH AMERICA	**74.8**	**80.4**	**82.2**	**12.6**	**13.5**	**13.6**	**26.0**	**26.0**	**25.8**
Argentina	7.2	9.2	10.3	2.0	3.6	3.7	7.5	7.4	7.4
Brazil	46.9	49.6	49.8	6.4	6.2	6.3	22.1	22.0	21.8
Chile	3.7	3.9	4.0	0.4	0.3	0.3	18.9	18.9	18.9
Colombia	5.2	5.6	5.6	1.8	1.6	1.4	42.9	42.2	42.0
Peru	3.2	3.6	3.5	0.5	0.6	0.6	24.6	24.6	24.6
Venezuela	4.1	4.3	4.5	0.4	0.4	0.6	50.0	50.4	49.6
NORTH AMERICA	**304.3**	**317.8**	**312.9**	**52.2**	**35.9**	**27.2**	**18.1**	**18.3**	**18.2**
Canada	21.8	19.6	19.6	5.4	3.6	2.7	6.2	5.9	6.0
United States of America	282.5	298.2	293.2	46.8	32.3	24.5	19.4	19.7	19.5
EUROPE	**218.1**	**204.4**	**209.2**	**31.6**	**22.7**	**24.9**	**22.9**	**22.4**	**22.7**
European Union	155.3	151.6	150.4	22.1	17.0	13.5	18.2	18.7	18.9
Russian Federation	31.7	21.0	25.9	4.0	0.7	4.5	30.5	27.7	28.2
Serbia	5.0	5.9	6.0	0.7	0.9	0.2	20.9	20.9	20.8
Ukraine	13.5	13.1	13.7	3.2	2.6	4.0	47.7	43.9	43.8
OCEANIA	**8.6**	**8.0**	**8.9**	**2.6**	**4.0**	**3.9**	**8.2**	**8.1**	**8.1**
Australia	7.8	7.2	8.1	2.5	3.9	3.8	10.6	10.5	10.4
WORLD	**1 104.2**	**1 144.5**	**1 154.7**	**184.0**	**170.1**	**168.0**	**28.3**	**28.8**	**28.7**
Developing countries	536.7	577.0	587.9	93.2	102.8	106.3	29.5	30.1	30.0
Developed countries	567.5	567.5	566.8	90.8	67.4	61.6	23.6	23.6	23.3
LIFDCs	175.3	188.3	190.6	19.0	22.8	23.3	37.4	38.2	38.1
LDCs	60.0	66.6	67.0	7.6	11.7	10.5	54.6	57.0	57.0

Table A4 (a). Maize statistics

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**229.7**	**250.0**	**259.4**	**45.4**	**49.4**	**51.3**	**5.1**	**5.6**	**5.6**
China	160.8	177.3	184.5	4.8	6.0	9.2	0.6	0.1	0.1
of which Taiwan Prov.	-	-	-	4.4	4.6	4.6	-	-	-
India	18.5	20.2	20.6	-	0.1	0.1	2.2	2.6	2.3
Indonesia	15.7	18.4	17.9	0.7	1.8	2.0	0.8	1.6	1.6
Iran, Islamic Republic of	1.3	1.0	1.3	3.0	3.4	3.0	-	-	-
Japan	-	-	-	16.4	15.8	16.2	-	-	-
Korea, D.P.R.	1.6	1.7	1.7	0.3	0.8	0.5	-	-	-
Korea, Republic of	0.1	0.1	0.1	8.2	8.2	7.0	-	-	-
Malaysia	-	-	-	2.7	2.7	2.8	-	-	-
Pakistan	3.5	3.3	3.5	-	-	-	-	-	-
Philippines	6.9	6.4	7.3	0.3	0.4	0.3	-	-	-
Thailand	4.3	3.9	4.2	0.4	0.6	0.6	0.7	0.4	0.7
Turkey	4.0	4.3	4.2	0.6	0.4	0.4	0.1	0.1	0.1
Viet Nam	4.4	4.7	4.8	1.0	1.5	1.6	-	-	-
AFRICA	**55.7**	**66.3**	**63.2**	**13.7**	**13.7**	**14.6**	**3.4**	**4.8**	**4.9**
Algeria	-	-	-	2.1	2.4	2.3	-	-	-
Egypt	7.3	7.2	7.7	5.0	5.5	5.8	-	-	-
Ethiopia	4.4	4.8	4.4	0.1	-	-	0.1	0.1	-
Kenya	2.6	2.9	2.8	0.9	0.4	1.0	-	-	-
Morocco	0.1	0.2	0.2	1.7	2.0	2.0	-	-	-
Nigeria	7.9	9.3	9.3	0.1	0.2	0.2	0.2	0.3	0.3
South Africa	10.5	13.4	11.2	0.3	-	-	1.6	2.2	2.0
Tanzania, United Rep. of	3.4	3.6	3.3	0.1	0.1	0.1	0.1	0.1	-
CENTRAL AMERICA	**27.0**	**27.6**	**25.9**	**13.4**	**13.2**	**13.3**	**0.4**	**0.2**	**0.1**
Mexico	22.7	23.3	21.3	8.6	8.0	8.5	0.3	0.2	0.1
SOUTH AMERICA	**83.9**	**89.6**	**90.3**	**9.0**	**8.8**	**9.5**	**22.8**	**28.3**	**28.1**
Argentina	19.0	22.7	23.0	-	-	-	13.3	15.4	16.5
Brazil	54.0	56.1	56.2	1.0	0.4	0.5	8.0	11.5	10.0
Chile	1.4	1.4	1.4	1.5	1.3	1.5	0.1	-	-
Colombia	1.7	1.5	1.5	3.0	3.3	3.4	-	-	-
Peru	1.5	1.5	1.5	1.5	1.7	1.7	-	-	-
Venezuela	2.4	2.4	2.4	1.3	1.5	1.8	-	-	-
NORTH AMERICA	**334.4**	**327.9**	**325.9**	**2.7**	**1.9**	**1.8**	**53.5**	**49.4**	**42.2**
Canada	10.6	11.7	10.1	2.3	1.2	1.4	0.4	1.3	0.7
United States of America	323.8	316.2	315.8	0.4	0.7	0.4	53.0	48.2	41.5
EUROPE	**81.7**	**83.4**	**99.0**	**8.0**	**7.7**	**3.5**	**6.8**	**8.7**	**13.0**
European Union	56.6	56.7	64.0	7.1	7.0	3.0	1.6	1.1	1.5
Russian Federation	4.9	3.1	5.0	0.3	0.1	0.1	0.6	0.1	0.3
Serbia	5.7	7.2	6.5	-	-	-	1.1	1.6	1.6
Ukraine	9.8	11.1	17.7	-	-	-	3.6	5.8	9.5
OCEANIA	**0.5**	**0.5**	**0.5**	**-**	**-**	**-**	**-**	**-**	**-**
WORLD	**812.9**	**845.3**	**864.2**	**92.3**	**94.7**	**94.0**	**91.9**	**97.0**	**94.0**
Developing countries	384.1	418.6	425.8	63.5	67.9	71.3	30.0	36.7	36.7
Developed countries	428.8	426.7	438.4	28.7	26.8	22.7	61.9	60.3	57.3
LIFDCs	99.4	110.7	111.9	12.2	14.1	14.8	5.2	7.2	7.2
LDCs	30.1	35.3	34.7	1.9	1.8	1.9	1.9	2.5	2.8

Table A4 (b). Maize statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**268.0**	**291.0**	**299.2**	**56.9**	**62.0**	**67.9**	**8.9**	**9.2**	**9.1**
China	163.7	181.3	188.7	44.0	48.7	53.6	7.1	7.7	7.6
of which Taiwan Prov.	4.6	4.7	4.6	0.4	0.3	0.3	5.4	5.4	5.4
India	16.2	17.1	17.5	2.3	2.1	3.0	5.8	6.0	6.0
Indonesia	15.4	17.9	18.3	1.4	2.4	2.4	31.6	31.1	31.3
Iran, Islamic Republic of	4.2	4.4	4.3	0.4	0.4	0.4	1.0	1.0	1.0
Japan	16.6	16.2	16.2	1.1	0.8	0.8	26.7	26.8	26.8
Korea, D.P.R.	2.0	2.4	2.2	-	0.1	0.1	65.2	84.0	75.7
Korea, Republic of	8.2	8.2	7.4	1.8	2.0	1.7	1.9	1.9	1.8
Malaysia	2.7	2.9	2.9	0.3	0.3	0.1	1.7	1.7	1.6
Pakistan	3.4	3.4	3.5	1.1	1.0	1.0	7.9	7.3	7.3
Philippines	7.1	7.2	7.5	0.9	0.5	0.6	16.2	14.8	15.3
Thailand	4.0	4.1	4.1	0.2	0.2	0.2	1.3	1.2	1.2
Turkey	4.6	4.6	4.6	0.6	0.6	0.5	13.1	13.1	12.9
Viet Nam	5.4	6.0	6.1	1.1	1.2	1.5	7.1	7.1	7.3
AFRICA	**66.2**	**73.3**	**72.6**	**8.4**	**11.5**	**11.6**	**39.0**	**40.5**	**39.9**
Algeria	2.1	2.3	2.3	0.2	0.4	0.4	3.7	3.7	3.6
Egypt	12.3	12.8	13.2	0.8	0.9	1.2	43.3	43.2	42.5
Ethiopia	4.3	4.7	4.5	0.3	0.3	0.2	42.3	41.6	41.6
Kenya	3.6	3.8	3.9	1.2	0.7	0.7	82.9	82.8	82.7
Morocco	1.9	2.0	2.0	0.3	0.5	0.7	10.8	10.5	10.7
Nigeria	7.8	9.1	9.2	0.4	0.5	0.5	33.5	36.5	36.0
South Africa	9.3	10.9	9.2	1.6	2.5	2.5	91.6	98.9	88.2
Tanzania, United Rep. of	3.4	3.5	3.5	0.2	0.2	0.1	68.4	66.4	66.2
CENTRAL AMERICA	**40.1**	**39.8**	**39.6**	**3.3**	**3.2**	**2.9**	**100.6**	**100.8**	**100.4**
Mexico	31.0	30.4	30.2	2.2	2.2	2.0	144.6	144.6	144.1
SOUTH AMERICA	**66.4**	**70.5**	**71.5**	**11.4**	**11.9**	**11.6**	**24.6**	**24.5**	**24.4**
Argentina	4.8	5.7	6.3	1.4	2.5	2.2	7.3	7.3	7.2
Brazil	44.2	46.8	46.7	6.2	6.0	6.0	21.0	21.0	20.8
Chile	2.9	2.7	2.8	0.4	0.2	0.2	16.8	16.7	16.7
Colombia	4.7	5.0	5.0	1.8	1.5	1.4	41.3	40.6	40.5
Peru	2.9	3.2	3.1	0.5	0.6	0.6	18.6	18.6	18.6
Venezuela	3.6	3.8	4.0	0.4	0.4	0.5	49.4	49.9	49.1
NORTH AMERICA	**280.1**	**296.4**	**293.8**	**44.1**	**29.9**	**23.0**	**14.8**	**15.1**	**15.0**
Canada	12.4	11.5	11.5	1.7	1.3	1.0	3.4	3.3	3.3
United States of America	267.7	285.0	282.2	42.4	28.7	22.0	16.1	16.4	16.2
EUROPE	**83.4**	**82.8**	**87.5**	**10.8**	**10.4**	**12.4**	**7.3**	**7.9**	**8.0**
European Union	63.1	62.6	65.5	7.5	7.0	7.0	7.8	8.5	8.7
Russian Federation	4.6	3.2	4.2	0.2	0.1	0.7	2.9	2.7	2.7
Serbia	4.6	5.5	5.6	0.7	0.9	0.2	19.3	19.2	19.2
Ukraine	5.6	6.0	6.6	1.7	1.4	3.0	11.6	13.1	13.1
OCEANIA	**0.5**	**0.5**	**0.5**	**0.1**	**0.1**	**0.1**	**2.6**	**2.5**	**2.5**
WORLD	**804.6**	**854.3**	**864.7**	**134.9**	**129.0**	**129.5**	**16.9**	**17.5**	**17.4**
Developing countries	411.8	444.8	454.6	77.0	85.1	90.5	17.8	18.3	18.2
Developed countries	392.9	409.5	410.1	57.9	43.9	39.0	13.7	14.4	14.0
LIFDCs	106.0	115.6	117.8	13.2	15.3	16.9	18.8	19.3	19.2
LDCs	29.7	33.0	33.4	4.0	6.3	6.4	24.8	25.7	25.8

Table A5 (a). Barley statistics

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**19.7**	**18.9**	**21.2**	**14.1**	**13.1**	**13.3**	**0.7**	**0.3**	**0.4**
China	3.1	2.0	2.4	1.7	2.3	2.3	-	-	-
India	1.4	1.4	1.5	-	-	-	-	-	-
Iran, Islamic Republic of	2.6	3.7	3.7	1.3	0.4	0.4	-	-	-
Iraq	0.6	0.5	0.4	-	-	-	-	-	-
Japan	0.2	0.2	0.2	1.3	1.3	1.3	-	-	-
Kazakhstan	2.3	1.3	2.8	-	0.1	-	0.6	0.2	0.3
Saudi Arabia	-	-	-	7.1	6.2	6.7	-	-	-
Syria	0.6	0.8	0.7	0.9	0.8	0.8	-	-	-
Turkey	6.8	7.2	7.6	0.2	0.2	0.1	0.1	0.1	0.2
AFRICA	**6.0**	**6.6**	**7.0**	**1.4**	**1.4**	**1.1**	**-**	**-**	**-**
Algeria	1.2	1.5	1.5	0.2	0.2	0.2	-	-	-
Ethiopia	1.7	1.8	1.7	-	-	-	-	-	-
Libya	0.1	0.1	0.1	0.4	0.4	0.4	-	-	-
Morocco	2.0	2.6	2.5	0.3	0.2	0.2	-	-	-
Tunisia	0.5	0.2	0.8	0.5	0.5	0.3	-	-	-
CENTRAL AMERICA	**0.7**	**0.7**	**0.7**	**0.2**	**0.1**	**0.1**	**-**	**-**	**-**
Mexico	0.7	0.7	0.7	0.1	0.1	0.1	-	-	-
SOUTH AMERICA	**2.5**	**3.8**	**4.1**	**0.8**	**0.9**	**0.8**	**0.9**	**1.3**	**1.9**
Argentina	1.5	3.0	3.1	-	-	-	0.8	1.2	1.8
NORTH AMERICA	**15.7**	**11.5**	**11.3**	**0.6**	**0.2**	**0.2**	**2.3**	**1.5**	**1.6**
Canada	10.8	7.6	7.9	-	-	-	1.9	1.3	1.3
United States of America	4.9	3.9	3.4	0.5	0.2	0.2	0.4	0.2	0.3
EUROPE	**94.3**	**73.5**	**81.7**	**0.6**	**0.8**	**0.5**	**9.7**	**8.8**	**8.1**
Belarus	2.0	2.0	1.9	-	-	-	-	-	-
European Union	61.7	53.1	52.2	0.2	0.2	0.1	2.9	4.9	2.3
Russian Federation	18.9	8.4	17.2	0.1	0.4	0.2	2.3	0.4	2.0
Ukraine	10.1	8.5	8.8	-	-	-	4.5	3.5	3.7
OCEANIA	**8.0**	**9.7**	**8.4**	**-**	**-**	**-**	**3.4**	**3.9**	**4.0**
Australia	7.7	9.3	8.1	-	-	-	3.4	3.9	4.0
WORLD	**146.9**	**124.7**	**134.4**	**17.6**	**16.5**	**16.0**	**17.0**	**15.9**	**16.0**
Developing countries	25.0	27.3	28.6	14.5	13.3	13.4	1.0	1.4	2.0
Developed countries	121.9	97.4	105.8	3.1	3.1	2.6	16.0	14.5	14.0
LIFDCs	5.8	5.8	5.6	1.1	1.0	0.9	-	-	-
LDCs	2.2	2.3	2.1	-	-	-	-	-	-

Table A5 (b). Barley statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**33.8**	**33.0**	**33.5**	**7.8**	**6.4**	**7.0**	**0.6**	**0.6**	**0.6**
China	4.7	4.2	4.6	1.3	1.5	1.6	0.1	0.1	0.1
India	1.4	1.4	1.5	-	-	-	1.0	0.9	1.0
Iran, Islamic Republic of	3.7	4.4	4.1	0.6	0.3	0.3	0.4	0.4	0.4
Iraq	0.6	0.5	0.4	-	-	-	4.0	3.8	3.8
Japan	1.6	1.6	1.5	0.5	0.5	0.4	2.4	2.4	2.4
Kazakhstan	1.8	1.6	1.6	0.5	0.1	1.1	1.3	1.2	1.2
Saudi Arabia	7.3	6.7	7.1	1.8	1.3	0.9	1.1	1.1	1.0
Syria	1.5	1.6	1.6	0.9	1.0	0.9	12.3	12.4	12.2
Turkey	7.6	7.4	7.6	1.7	1.2	1.2	1.1	1.1	1.1
AFRICA	**7.3**	**8.7**	**8.6**	**1.7**	**2.0**	**1.4**	**3.4**	**3.5**	**3.4**
Algeria	1.4	2.0	1.9	0.5	0.5	0.3	16.2	16.4	16.1
Ethiopia	1.6	1.8	1.8	0.1	0.2	0.1	16.4	16.7	16.6
Libya	0.4	0.5	0.5	-	-	-	13.1	12.6	12.3
Morocco	2.2	2.9	2.9	0.5	1.0	0.8	41.4	43.2	42.7
Tunisia	1.0	1.1	1.1	0.4	0.2	0.2	8.8	8.7	8.6
CENTRAL AMERICA	**0.8**	**0.7**	**0.7**	**0.2**	**0.1**	**0.1**	**-**	**-**	**-**
Mexico	0.8	0.7	0.7	0.2	0.1	0.1	-	-	-
SOUTH AMERICA	**2.4**	**2.7**	**2.9**	**0.3**	**0.8**	**0.9**	**0.5**	**0.5**	**0.5**
Argentina	0.7	1.1	1.2	0.2	0.7	0.8	-	-	-
NORTH AMERICA	**12.3**	**11.3**	**10.8**	**4.3**	**3.4**	**2.1**	**0.5**	**0.5**	**0.5**
Canada	7.6	6.8	6.7	2.3	1.4	0.9	0.4	0.3	0.3
United States of America	4.7	4.5	4.1	2.0	1.9	1.2	0.6	0.6	0.5
EUROPE	**83.0**	**75.4**	**74.6**	**14.4**	**8.3**	**7.8**	**1.6**	**1.6**	**1.5**
Belarus	2.0	2.0	2.0	0.2	0.1	-	-	-	-
European Union	57.3	55.8	53.2	10.3	6.7	3.5	0.8	0.8	0.8
Russian Federation	16.2	10.3	12.3	2.3	0.3	3.4	0.4	0.3	0.3
Ukraine	5.7	5.5	5.4	1.2	0.9	0.6	14.2	13.8	13.4
OCEANIA	**4.5**	**4.4**	**4.7**	**1.8**	**3.0**	**2.8**	**0.2**	**0.2**	**0.2**
Australia	4.2	4.0	4.3	1.8	3.0	2.8	0.3	0.3	0.3
WORLD	**144.1**	**136.3**	**135.9**	**30.5**	**24.0**	**22.1**	**1.1**	**1.1**	**1.1**
Developing countries	39.1	40.2	40.9	8.8	8.4	7.5	1.1	1.1	1.1
Developed countries	104.9	96.0	95.1	21.8	15.6	14.6	1.3	1.2	1.2
LIFDCs	6.8	6.8	6.7	1.3	1.4	1.2	1.1	1.1	1.1
LDCs	2.2	2.3	2.2	0.2	0.2	0.1	1.7	1.8	1.8

Table A6 (a). Sorghum statistics

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**10.2**	**10.2**	**10.5**	**1.7**	**1.7**	**1.7**	**0.1**	**0.1**	**0.1**
China	2.0	2.5	2.1	0.1	0.1	0.1	-	0.1	-
India	7.3	6.8	7.5	-	-	-	-	-	-
Japan	-	-	-	1.4	1.4	1.5	-	-	-
AFRICA	**25.1**	**28.0**	**25.7**	**1.1**	**0.8**	**1.0**	**0.7**	**0.9**	**0.7**
Burkina Faso	1.6	2.0	1.8	-	-	-	0.1	0.2	0.2
Ethiopia	2.9	3.5	2.7	0.2	-	0.1	0.1	0.3	-
Nigeria	9.0	8.8	8.7	-	-	-	0.1	0.1	0.1
Sudan	3.6	4.6	4.0	0.3	0.2	0.4	0.2	-	-
CENTRAL AMERICA	**6.8**	**7.4**	**6.9**	**2.0**	**2.2**	**2.2**	**-**	**-**	**-**
Mexico	6.3	7.0	6.4	2.0	2.2	2.2	-	-	-
SOUTH AMERICA	**5.3**	**6.2**	**7.6**	**0.5**	**1.1**	**1.0**	**1.2**	**1.9**	**2.0**
Argentina	2.4	3.6	4.5	-	-	-	1.1	1.9	2.0
Brazil	1.7	1.5	1.9	-	-	-	0.1	-	-
Venezuela	0.4	0.4	0.5	-	-	-	-	-	-
NORTH AMERICA	**11.5**	**8.8**	**6.2**	**-**	**-**	**-**	**5.0**	**3.7**	**3.0**
United States of America	11.5	8.8	6.2	-	-	-	5.0	3.7	3.0
EUROPE	**0.6**	**0.6**	**0.6**	**2.2**	**0.9**	**0.5**	**0.1**	**-**	**-**
European Union	0.6	0.6	0.6	2.1	0.8	0.4	0.1	-	-
OCEANIA	**2.6**	**1.5**	**2.1**	**0.1**	**0.1**	**0.1**	**0.7**	**0.6**	**0.7**
Australia	2.6	1.5	2.1	-	-	-	0.7	0.6	0.7
WORLD	**61.9**	**62.8**	**59.7**	**7.7**	**6.8**	**6.5**	**7.8**	**7.2**	**6.5**
Developing countries	47.1	51.7	50.5	3.8	4.2	4.4	1.9	2.9	2.8
Developed countries	14.9	11.1	9.2	3.9	2.6	2.1	5.8	4.3	3.7
LIFDCs	32.9	35.4	33.8	1.1	0.7	1.0	0.7	0.9	0.7
LDCs	14.3	17.6	15.4	0.9	0.5	0.8	0.6	0.8	0.6

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

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	17.9	18.8	19.0	0.5	0.5	0.6	-	-	-
AFRICA	17.7	21.1	19.5	0.1	0.1	0.1	0.5	0.4	0.7
CENTRAL AMERICA	0.1	0.1	0.2	0.1	0.1	0.1	-	-	-
SOUTH AMERICA	1.3	1.7	1.4	0.2	0.2	0.2	-	0.1	0.1
NORTH AMERICA	6.5	4.8	4.7	2.1	1.6	1.9	2.2	1.5	1.9
EUROPE	50.7	41.3	46.5	0.3	0.4	0.6	0.4	0.3	0.5
OCEANIA	1.8	2.3	2.3	0.1	0.1	0.1	0.3	0.2	0.3
WORLD	**96.1**	**90.1**	**93.5**	**3.4**	**2.9**	**3.5**	**3.4**	**2.5**	**3.5**

Table A6 (b). Sorghum statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**11.7**	**11.9**	**12.1**	**1.4**	**1.6**	**1.6**	**1.8**	**1.5**	**1.6**
China	2.0	2.5	2.2	0.8	0.8	0.7	0.5	0.4	0.4
India	7.3	6.7	7.3	0.2	0.2	0.4	5.2	4.4	4.5
Japan	1.3	1.5	1.6	0.2	0.4	0.2	-	-	-
AFRICA	**25.7**	**27.1**	**26.8**	**2.4**	**2.8**	**1.9**	**20.3**	**20.5**	**20.3**
Burkina Faso	1.5	1.7	1.7	0.1	0.2	0.2	83.0	85.7	84.0
Ethiopia	3.0	3.2	3.0	0.2	0.3	0.1	32.4	32.2	31.0
Nigeria	9.1	8.8	8.7	0.1	0.1	0.1	45.3	42.6	42.2
Sudan	4.1	4.5	4.5	0.4	0.3	0.2	76.4	78.0	78.2
CENTRAL AMERICA	**8.8**	**9.5**	**9.5**	**0.5**	**0.8**	**0.4**	**0.9**	**0.9**	**0.9**
Mexico	8.3	9.1	9.0	0.5	0.8	0.4	-	-	-
SOUTH AMERICA	**4.6**	**5.5**	**6.3**	**0.8**	**0.7**	**1.1**	**0.1**	**0.1**	**0.1**
Argentina	1.3	1.6	2.3	0.3	0.4	0.7	-	-	-
Brazil	1.7	1.7	1.8	0.2	0.1	0.2	-	-	-
Venezuela	0.5	0.5	0.5	-	-	0.1	-	-	-
NORTH AMERICA	**6.4**	**5.3**	**3.7**	**1.3**	**0.7**	**0.7**	**-**	**-**	**-**
United States of America	6.4	5.3	3.7	1.3	0.7	0.7	-	-	-
EUROPE	**2.6**	**1.5**	**1.2**	**0.6**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**
European Union	2.5	1.3	1.1	0.6	0.4	0.3	0.4	0.4	0.4
OCEANIA	**1.9**	**1.2**	**1.7**	**0.5**	**0.5**	**0.5**	**0.2**	**0.2**	**0.2**
Australia	1.8	1.0	1.6	0.5	0.5	0.5	-	-	-
WORLD	**61.7**	**62.0**	**61.3**	**7.4**	**7.4**	**6.4**	**4.1**	**4.1**	**4.1**
Developing countries	49.2	52.2	52.9	4.8	5.4	4.8	5.1	5.0	5.0
Developed countries	12.6	9.8	8.4	2.6	2.0	1.7	0.3	0.3	0.3
LIFDCs	33.5	34.3	34.7	2.6	3.0	2.4	9.1	8.9	8.9
LDCs	14.7	16.4	16.3	2.0	2.5	1.7	14.6	15.3	15.2

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

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	18.4	19.2	19.3	1.0	0.9	1.1	3.9	4.0	3.9
AFRICA	17.4	19.3	19.3	1.5	2.8	2.3	14.0	14.6	14.5
CENTRAL AMERICA	0.2	0.2	0.3	-	-	-	0.2	0.2	0.3
SOUTH AMERICA	1.4	1.8	1.5	0.1	0.1	0.1	0.9	0.8	0.8
NORTH AMERICA	5.4	4.8	4.6	2.5	1.9	1.4	2.8	2.7	2.7
EUROPE	49.1	44.8	45.8	5.8	3.7	4.5	13.7	12.8	12.9
OCEANIA	1.7	1.9	2.0	0.2	0.4	0.5	5.2	5.2	5.2
WORLD	**93.8**	**92.0**	**92.8**	**11.2**	**9.8**	**10.0**	**6.1**	**6.2**	**6.1**

Table A8 (a). Rice statistics

	Production			Imports			Exports		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	2008-2010 average	2011 estim.	2012 f'cast
	(. . . . . million tonnes, milled equivalent . . . . . .)								
ASIA	**409.2**	**421.9**	**436.2**	**14.4**	**16.7**	**16.2**	**23.6**	**26.4**	**26.4**
Bangladesh	30.8	33.5	34.6	0.8	1.5	0.6	-	-	-
China	131.9	135.1	139.2	1.0	1.5	1.1	0.9	0.5	0.8
of which Taiwan Prov.	1.1	1.0	1.1	0.3	0.4	0.4	0.1	0.1	0.1
India	95.0	95.3	103.0	0.1	0.1	0.1	2.6	3.5	5.0
Indonesia	38.2	41.9	42.9	0.5	1.7	1.2	-	-	-
Iran, Islamic Republic of	1.5	1.4	1.5	1.1	1.2	1.3	-	-	-
Iraq	0.2	0.1	0.1	1.0	1.2	1.3	-	-	-
Japan	7.9	7.7	7.5	0.7	0.7	0.7	0.2	0.2	0.2
Korea, D.P.R.	1.4	1.6	1.6	0.1	0.2	0.2	-	-	-
Korea, Republic of	4.7	4.3	4.2	0.3	0.3	0.4	-	-	-
Malaysia	1.6	1.6	1.7	1.1	1.0	1.1	-	-	-
Myanmar	19.5	19.4	18.9	-	-	-	0.7	0.7	0.6
Pakistan	6.5	4.8	6.5	-	0.1	-	3.1	2.7	3.0
Philippines	10.7	11.0	10.7	2.2	1.2	1.8	-	-	-
Saudi Arabia	-	-	-	1.0	1.2	1.2	-	-	-
Sri Lanka	2.4	2.9	2.9	0.1	-	-	-	-	-
Thailand	21.1	22.8	21.2	0.3	0.4	0.4	9.2	10.3	8.2
Viet Nam	25.3	26.7	28.0	0.4	0.6	0.6	5.9	7.2	7.3
AFRICA	**15.4**	**16.6**	**17.0**	**9.6**	**10.6**	**10.5**	**0.6**	**0.3**	**0.3**
Cote d'Ívoire	0.4	0.5	0.4	0.8	0.9	0.9	-	-	-
Egypt	4.5	3.6	4.0	-	0.1	0.1	0.5	0.1	0.1
Madagascar	2.7	3.2	2.9	0.1	0.2	0.2	-	-	-
Nigeria	2.3	2.5	2.6	2.0	2.2	2.2	-	-	-
Senegal	0.3	0.4	0.4	0.8	0.7	0.8	-	-	-
South Africa	-	-	-	0.8	1.0	1.0	-	-	-
Tanzania, United Rep. of	0.9	0.9	0.9	0.1	0.1	0.1	-	-	-
CENTRAL AMERICA	**1.7**	**1.9**	**2.0**	**2.1**	**2.2**	**2.2**	**-**	**0.1**	**-**
Cuba	0.3	0.3	0.3	0.5	0.6	0.6	-	-	-
Mexico	0.2	0.2	0.2	0.6	0.7	0.7	-	-	-
SOUTH AMERICA	**16.2**	**15.8**	**17.8**	**1.1**	**1.4**	**1.5**	**2.3**	**3.1**	**2.6**
Argentina	0.8	0.8	1.2	-	-	-	0.4	0.6	0.5
Brazil	8.0	7.8	9.1	0.6	0.7	0.8	0.5	1.1	0.8
Peru	1.9	1.9	1.8	0.1	0.2	0.2	-	-	-
Uruguay	0.9	0.8	1.2	-	-	-	0.8	0.9	0.8
NORTH AMERICA	**6.7**	**7.6**	**6.0**	**1.0**	**1.0**	**1.0**	**3.4**	**3.3**	**3.1**
Canada	-	-	-	0.3	0.3	0.3	-	-	-
United States of America	6.7	7.6	6.0	0.6	0.6	0.7	3.4	3.3	3.1
EUROPE	**2.3**	**2.7**	**2.8**	**1.7**	**1.7**	**1.7**	**0.3**	**0.6**	**0.6**
European Union	1.7	1.9	1.9	1.2	1.2	1.3	0.2	0.3	0.3
Russian Federation	0.5	0.7	0.8	0.2	0.2	0.2	0.1	0.3	0.3
OCEANIA	**0.1**	**0.1**	**0.5**	**0.5**	**0.4**	**0.4**	**0.1**	**0.3**	**0.5**
Australia	0.1	0.1	0.5	0.2	0.1	0.1	0.1	0.3	0.5
WORLD	**451.5**	**466.6**	**482.4**	**30.4**	**34.0**	**33.5**	**30.3**	**34.0**	**33.5**
Developing countries	434.2	447.9	465.0	25.6	29.2	28.7	26.3	29.6	29.1
Developed countries	17.3	18.7	17.4	4.7	4.8	4.9	4.0	4.4	4.4
LIFDCs	210.7	219.0	230.7	14.9	16.9	16.2	7.4	7.7	9.6
LDCs	44.5	0.9	0.6	6.4	7.5	6.6	1.9	2.0	2.0

Table A8 (b). Rice statistics

	Total Utilization			Stocks ending in			Per caput food use		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	2008-2010 average	2011 estim.	2012 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
	(. . . . . million tonnes, milled equivalent . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**391.0**	**405.6**	**415.6**	**117.3**	**131.8**	**142.6**	**81.7**	**81.8**	**82.5**
Bangladesh	31.2	33.9	35.1	5.1	6.5	6.5	149.0	155.3	159.0
China	127.3	131.1	132.6	64.3	75.6	82.6	77.1	76.9	76.8
of which Taiwan Prov.	1.3	1.3	1.4	0.2	0.2	0.2	51.1	54.2	55.7
India	90.2	91.6	94.3	19.2	19.3	23.0	72.7	71.6	72.4
Indonesia	38.1	42.0	44.0	3.6	5.4	6.0	157.2	161.6	164.8
Iran, Islamic Republic of	2.7	2.6	2.7	0.3	0.3	0.4	31.9	30.6	31.7
Iraq	1.2	1.3	1.4	-	0.1	0.1	39.5	40.4	42.6
Japan	8.3	8.0	8.0	2.3	2.6	2.6	59.8	58.4	58.3
Korea, D.P.R.	1.5	1.7	1.8	-	0.1	0.1	57.7	63.5	65.2
Korea, Republic of	4.8	4.7	4.6	1.0	1.4	1.3	74.2	72.2	71.7
Malaysia	2.5	2.7	2.7	0.2	0.2	0.2	83.1	87.3	86.6
Myanmar	19.0	19.2	19.2	5.5	4.8	4.0	237.9	240.8	240.9
Pakistan	3.2	2.8	3.4	0.8	0.4	0.5	15.4	13.5	15.6
Philippines	12.3	12.5	12.8	2.8	3.0	2.8	119.7	119.8	120.7
Saudi Arabia	1.1	1.1	1.2	0.2	0.2	0.2	39.4	39.4	41.2
Sri Lanka	2.5	2.8	2.9	0.2	0.4	0.4	110.9	117.6	120.1
Thailand	11.8	12.5	13.2	5.0	6.1	6.3	128.3	133.0	133.0
Viet Nam	20.2	20.7	21.1	4.0	2.7	3.0	186.2	185.9	186.1
AFRICA	**24.3**	**26.6**	**27.5**	**3.0**	**3.0**	**2.8**	**21.4**	**22.1**	**22.6**
Cote d'Ívoire	1.2	1.3	1.3	-	-	-	57.6	57.7	59.1
Egypt	3.8	3.7	3.9	1.3	1.1	1.2	38.4	38.1	39.0
Madagascar	2.8	3.3	3.2	0.1	0.2	0.1	124.5	129.4	131.3
Nigeria	4.3	4.7	4.8	0.2	0.3	0.3	24.6	25.7	25.8
Senegal	1.1	1.2	1.2	0.1	-	-	79.2	79.8	80.3
South Africa	0.9	0.8	0.9	0.1	-	0.1	17.0	15.9	17.1
Tanzania, United Rep. of	0.9	1.0	1.0	-	-	-	18.2	17.5	17.4
CENTRAL AMERICA	**3.8**	**4.0**	**4.1**	**0.4**	**0.4**	**0.4**	**18.8**	**19.4**	**19.6**
Cuba	0.8	0.9	0.9	-	-	-	71.1	75.8	76.3
Mexico	0.8	0.8	0.8	-	-	-	7.0	7.2	7.1
SOUTH AMERICA	**15.2**	**15.4**	**15.8**	**1.3**	**1.0**	**1.2**	**36.1**	**36.1**	**36.3**
Argentina	0.4	0.4	0.5	0.1	-	0.1	9.0	7.7	9.5
Brazil	8.3	8.3	8.6	0.2	0.2	0.4	41.3	40.9	40.9
Peru	1.9	2.1	2.1	0.3	0.3	0.3	59.5	62.4	62.6
Uruguay	0.1	0.1	0.1	0.1	-	0.1	7.5	7.4	10.6
NORTH AMERICA	**4.3**	**5.0**	**4.3**	**1.1**	**1.6**	**1.2**	**10.7**	**11.9**	**10.9**
Canada	0.3	0.3	0.3	-	-	-	10.5	10.0	10.1
United States of America	3.9	4.6	4.0	1.0	1.5	1.2	10.7	12.1	11.0
EUROPE	**3.7**	**3.7**	**3.9**	**0.5**	**0.6**	**0.6**	**4.7**	**4.7**	**4.9**
European Union	2.7	2.8	2.9	0.5	0.5	0.5	5.0	5.1	5.3
Russian Federation	0.6	0.6	0.7	-	-	-	4.3	3.9	4.3
OCEANIA	**0.5**	**0.6**	**0.6**	**-**	**-**	**0.1**	**13.9**	**14.9**	**15.2**
Australia	0.2	0.2	0.3	-	-	0.1	8.7	8.9	9.7
WORLD	**442.8**	**460.9**	**471.9**	**123.7**	**138.4**	**149.0**	**56.1**	**56.4**	**56.9**
Developing countries	424.7	442.2	453.6	119.6	133.6	144.4	67.2	67.3	67.9
Developed countries	18.1	18.6	18.3	4.1	4.8	4.6	12.1	12.3	12.2
LIFDCs	214.2	225.7	233.8	36.8	40.3	44.3	65.5	65.6	66.6
LDCs	72.4	78.0	79.8	13.9	14.8	13.8	65.7	66.8	67.6

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

	Wheat[1]			Coarse Grains[2]			Rice (milled basis)		
	2009/10	2010/11 estim.	2011/12 f'cast	2009/10	2010/11 estim.	2011/12 f'cast	2009/10	2010/11 estim.	2011/12 f'cast
	UNITED STATES (June/May)			**UNITED STATES**			**UNITED STATES** (Aug./July)		
Opening stocks	17.9	26.6	23.5	47.1	48.1	32.3	1.0	1.2	1.5
Production	60.4	60.1	54.7	349.0	330.6	326.6	7.1	7.6	6.0
Imports	3.2	2.6	3.3	2.3	2.5	2.3	0.6	0.6	0.6
Total Supply	**81.5**	**89.3**	**81.4**	**398.4**	**381.2**	**361.3**	**8.7**	**9.4**	**8.1**
Domestic use	31.0	30.7	32.1	295.6	298.2	293.2	4.0	4.4	4.0
Exports	23.9	35.1	26.5	54.8	50.7	43.5	3.5	3.5	2.9
Closing stocks	26.6	23.5	22.8	48.1	32.3	24.5	1.2	1.5	1.2
	CANADA (August/July)			**CANADA**			**THAILAND** (Nov./Oct.)[3]		
Opening stocks	6.5	7.8	7.2	6.4	5.7	3.6	5.2	5.7	6.1
Production	26.8	23.2	24.2	22.7	22.4	21.4	21.2	22.8	21.2
Imports	0.1	0.1	0.0	2.2	1.0	1.8	0.3	0.4	0.4
Total Supply	**33.5**	**31.1**	**31.4**	**31.3**	**29.2**	**26.8**	**26.7**	**28.9**	**27.7**
Domestic use	7.2	7.7	8.3	20.9	19.6	19.6	12.0	12.5	13.2
Exports	18.5	16.2	17.0	4.7	6.0	4.5	9.0	10.3	8.2
Closing stocks	7.8	7.2	6.1	5.7	3.6	2.7	5.7	6.1	6.3
	ARGENTINA (Dec./Nov.)			**ARGENTINA**			**INDIA** (Oct./Sept.)[3]		
Opening stocks	1.9	0.7	1.9	2.2	0.9	3.6	21.9	19.0	19.3
Production	8.8	14.7	13.0	16.2	30.0	31.0	89.1	95.3	103.0
Imports	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Supply	**10.6**	**15.4**	**14.9**	**18.4**	**30.9**	**34.7**	**111.1**	**114.4**	**122.3**
Domestic use	4.9	5.0	5.1	5.9	9.2	10.3	89.9	91.6	94.3
Exports	5.1	8.5	7.5	11.7	18.1	20.7	2.2	3.5	5.0
Closing stocks	0.7	1.9	2.3	0.9	3.6	3.7	19.0	19.3	23.0
	AUSTRALIA (Oct./Sept.)			**AUSTRALIA**			**PAKISTAN** (Nov./Oct.)[3]		
Opening stocks	4.5	4.6	5.0	2.7	3.0	3.9	1.0	0.9	0.4
Production	21.9	26.3	26.2	12.7	13.5	12.8	6.9	4.8	6.5
Imports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Supply	**26.4**	**30.9**	**31.2**	**15.4**	**16.4**	**16.7**	**7.9**	**5.8**	**6.9**
Domestic use	7.0	7.6	8.0	7.9	7.2	8.1	3.5	2.8	3.4
Exports	14.8	18.3	17.5	4.6	5.3	4.9	3.5	2.7	3.0
Closing stocks	4.6	5.0	5.7	3.0	3.9	3.8	0.9	0.4	0.5
	EU (July/June)			**EU**			**VIET NAM** (Nov./Oct.)[3]		
Opening stocks	20.0	16.0	11.0	24.0	26.0	17.0	4.3	3.4	2.7
Production	138.6	136.9	138.6	156.0	140.7	147.3	26.0	26.7	28.0
Imports	5.3	4.7	7.5	2.6	8.2	3.8	0.5	0.6	0.6
Total Supply	**163.9**	**157.6**	**157.1**	**182.5**	**174.8**	**168.0**	**30.8**	**30.6**	**31.3**
Domestic use	126.1	124.1	128.6	153.7	151.6	150.4	20.5	20.7	21.1
Exports	21.8	22.5	15.0	2.9	6.2	4.1	6.9	7.2	7.3
Closing stocks	16.0	11.0	13.5	26.0	17.0	13.5	3.4	2.7	3.0
	TOTAL OF ABOVE			**TOTAL OF ABOVE**			**TOTAL OF ABOVE**		
Opening stocks	50.8	55.6	48.5	82.3	83.7	60.4	33.4	30.2	30.0
Production	256.5	261.1	256.6	556.6	537.2	539.2	150.3	157.2	164.7
Imports	8.6	7.4	10.8	7.2	11.7	8.0	1.5	1.7	1.7
Total Supply	**315.9**	**324.2**	**315.9**	**646.1**	**632.6**	**607.5**	**185.2**	**189.2**	**196.3**
Domestic use	176.2	175.1	182.0	483.9	485.8	481.7	129.9	132.0	136.0
Exports	84.1	100.6	83.5	78.6	86.4	77.7	25.2	27.2	26.4
Closing stocks	55.6	48.5	50.4	83.7	60.4	48.1	30.2	30.0	33.9

[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		
	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast	07/08-09/10 average	2010/11 estim.	2011/12 f'cast
ASIA	**124.7**	**130.3**	**133.6**	**67.1**	**76.7**	**82.1**	**2.3**	**2.0**	**2.0**
China	57.5	59.7	59.3	47.8	56.7	61.3	1.3	0.9	0.9
of which Taiwan Prov.	0.1	0.1	0.1	2.3	2.4	2.5	-	-	-
India	35.3	37.5	39.4	0.2	0.2	0.4	0.5	0.5	0.5
Indonesia	8.4	9.3	9.9	1.7	2.1	2.1	0.1	0.1	0.1
Iran, Islamic Republic of	0.7	0.7	0.9	0.8	0.8	0.8	-	-	-
Japan	0.3	0.3	0.2	6.2	5.8	5.9	-	-	-
Korea, Republic of	0.2	0.2	0.2	1.4	1.5	1.6	-	-	-
Malaysia	4.6	4.8	4.9	0.7	0.7	0.7	-	-	-
Pakistan	4.8	4.7	5.1	1.1	1.0	1.2	-	0.1	-
Thailand	0.7	0.8	0.8	1.7	2.2	2.1	-	-	-
Turkey	2.1	2.6	2.6	2.1	2.2	2.6	-	0.1	0.1
AFRICA	**16.6**	**17.4**	**17.9**	**2.7**	**3.2**	**3.0**	**0.8**	**0.8**	**1.1**
Nigeria	4.7	4.7	4.9	-	-	-	0.2	0.2	0.2
CENTRAL AMERICA	**1.2**	**1.3**	**1.2**	**5.9**	**5.9**	**6.0**	**0.1**	**0.2**	**0.2**
Mexico	0.7	0.8	0.7	5.2	5.3	5.3	-	-	-
SOUTH AMERICA	**124.7**	**147.5**	**149.6**	**2.7**	**1.1**	**1.0**	**45.3**	**48.0**	**54.2**
Argentina	48.8	54.1	58.0	1.5	0.1	-	11.3	9.6	11.3
Brazil	64.9	79.3	77.3	0.1	-	-	28.0	31.1	34.5
Paraguay	6.5	8.7	8.7	-	-	-	4.5	5.4	6.4
NORTH AMERICA	**106.8**	**119.2**	**110.2**	**2.1**	**1.9**	**1.9**	**46.8**	**52.2**	**49.5**
Canada	16.1	18.4	18.0	0.7	0.7	0.5	10.0	10.9	10.7
United States of America	90.7	100.9	92.2	1.4	1.3	1.4	36.8	41.3	38.8
EUROPE	**46.9**	**50.1**	**55.0**	**19.6**	**19.7**	**20.3**	**3.6**	**3.7**	**5.2**
European Union	27.5	29.0	28.7	18.1	17.9	18.7	0.8	0.8	0.8
Russian Federation	8.0	7.5	11.6	0.9	1.3	1.0	0.3	0.1	0.9
Ukraine	9.3	11.6	12.5	-	-	-	2.4	2.5	3.2
OCEANIA	**2.6**	**4.1**	**4.6**	**0.1**	**0.1**	**0.1**	**1.1**	**1.8**	**2.2**
Australia	2.2	3.7	4.2	0.1	0.1	0.1	1.0	1.8	2.1
WORLD	**423.4**	**469.9**	**472.0**	**100.2**	**108.7**	**114.3**	**100.1**	**108.8**	**114.3**
Developing countries	262.0	291.0	296.6	71.2	80.3	85.2	48.4	51.0	57.0
Developed countries	161.4	178.9	175.4	29.0	28.4	29.1	51.7	57.8	57.3
LIFDCs	128.7	133.8	137.6	52.0	61.3	66.0	2.9	2.7	2.7
LDCs	10.2	10.6	10.9	0.3	0.3	0.3	0.4	0.5	0.5

[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		
	07/08-09/10 average	2010/11 *estim.*	2011/12 *f'cast*	07/08-09/10 average	2010/11 *estim.*	2011/12 *f'cast*	07/08-09/10 average	2010/11 *estim.*	2011/12 *f'cast*
ASIA	**34.6**	**37.4**	**38.7**	**39.7**	**42.6**	**44.3**	**79.9**	**87.4**	**92.9**
Bangladesh	1.2	1.4	1.4	-	-	-	1.5	1.6	1.6
China	10.8	10.6	11.4	0.7	0.8	0.7	30.1	33.0	35.7
of which Taiwan Prov.	0.4	0.5	0.5	-	-	-	0.9	0.9	0.9
India	8.0	8.7	9.1	0.5	0.4	0.4	17.4	18.7	19.5
Indonesia	0.1	0.1	0.1	17.9	19.8	21.0	5.7	6.9	7.8
Iran	1.2	1.6	1.5	0.1	0.2	0.1	1.6	1.8	1.9
Japan	1.1	1.2	1.2	-	-	-	3.1	3.1	3.1
Korea, Republic of	0.9	0.9	0.9	-	-	-	1.2	1.3	1.3
Malaysia	1.5	2.2	2.1	17.2	18.5	19.1	3.8	3.8	4.0
Pakistan	2.1	2.4	2.4	0.1	0.1	0.1	3.6	4.0	4.0
Philippines	0.5	0.5	0.5	1.1	1.0	1.1	1.0	1.1	1.1
Singapore	0.6	0.8	0.9	0.3	0.3	0.3	0.3	0.5	0.7
Turkey	1.2	1.2	1.4	0.3	0.3	0.3	2.3	2.5	2.7
AFRICA	**7.4**	**7.8**	**8.0**	**1.2**	**1.3**	**1.3**	**13.0**	**13.8**	**14.1**
Algeria	0.6	0.5	0.6	0.1	-	-	0.7	0.7	0.7
Egypt	1.6	1.5	1.7	0.1	-	0.1	2.0	2.1	2.1
Nigeria	0.8	1.1	1.1	0.1	0.1	0.1	2.5	2.8	2.9
South Africa	0.7	0.8	0.8	0.1	0.1	0.1	1.1	1.2	1.2
CENTRAL AMERICA	**2.3**	**2.4**	**2.4**	**0.6**	**0.6**	**0.6**	**4.5**	**4.7**	**4.6**
Mexico	1.2	1.2	1.2	0.1	0.1	0.1	2.9	3.0	3.0
SOUTH AMERICA	**2.3**	**2.5**	**2.6**	**9.7**	**9.2**	**9.3**	**12.3**	**14.5**	**15.6**
Argentina	0.1	0.1	0.1	6.2	6.1	6.1	2.2	3.0	3.3
Brazil	0.4	0.5	0.6	2.1	1.8	1.9	6.5	7.4	8.2
NORTH AMERICA	**4.0**	**4.4**	**4.6**	**6.1**	**6.9**	**6.5**	**17.3**	**18.0**	**18.9**
Canada	0.5	0.6	0.5	2.3	3.1	3.2	0.9	0.8	1.0
United States of America	3.5	3.8	4.1	3.8	3.8	3.4	16.4	17.2	17.9
EUROPE	**13.4**	**13.0**	**13.6**	**5.4**	**5.7**	**6.6**	**34.9**	**35.8**	**36.4**
European Union	10.8	10.3	10.9	2.1	2.1	2.1	29.2	29.7	30.0
Russian Federation	1.2	1.2	1.2	0.8	0.4	1.3	3.6	3.7	3.8
Ukraine	0.5	0.5	0.5	2.2	2.8	2.8	0.9	0.9	1.2
OCEANIA	**0.5**	**0.6**	**0.6**	**1.7**	**1.8**	**1.9**	**1.0**	**1.1**	**1.1**
Australia	0.4	0.4	0.4	0.6	0.7	0.7	0.7	0.7	0.7
WORLD	**64.5**	**68.0**	**70.4**	**64.5**	**68.0**	**70.4**	**163.0**	**175.3**	**183.8**
Developing countries	44.4	47.7	49.4	51.8	54.2	56.1	104.6	115.2	122.1
Developed countries	20.1	20.3	21.0	12.7	13.8	14.4	58.3	60.0	61.7
LIFDCs	30.3	31.7	33.2	22.1	23.9	25.0	72.9	79.7	84.5
LDCs	4.2	4.6	4.6	0.4	0.5	0.4	7.1	7.6	7.7

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

Table A12. Total meals and cakes statistics[1] *(million tonnes)*

	Imports			Exports			Utilization		
	07/08-09/10 average	2010/11 *estim.*	2011/12 *f'cast*	07/08-09/10 average	2010/11 *estim.*	2011/12 *f'cast*	07/08-09/10 average	2010/11 *estim.*	2011/12 *f'cast*
ASIA	**25.8**	**30.0**	**31.0**	**13.7**	**14.7**	**15.0**	**106.7**	**125.7**	**133.6**
China	3.0	4.0	4.2	1.6	0.9	0.8	54.6	69.6	75.1
of which Taiwan Prov.	0.5	0.5	0.5	-	-	-	2.3	2.4	2.4
India	0.1	0.2	0.1	5.1	5.9	6.2	11.4	12.2	13.1
Indonesia	2.7	3.1	3.4	2.8	3.3	3.3	3.0	3.3	3.8
Japan	2.5	2.9	2.9	-	-	-	7.1	7.1	7.1
Korea, Republic of	3.5	3.3	3.4	-	-	-	4.6	4.4	4.5
Malaysia	1.0	1.1	1.2	2.3	2.4	2.5	1.8	1.9	2.0
Pakistan	0.5	0.6	0.6	0.1	0.2	0.1	2.8	3.1	3.1
Philippines	1.7	1.9	2.1	0.5	0.5	0.6	2.3	2.4	2.6
Saudi Arabia	0.5	0.5	0.5	-	-	-	0.6	0.5	0.5
Thailand	2.7	2.8	2.9	0.1	0.1	0.1	4.5	5.0	5.3
Turkey	0.9	1.1	1.1	-	0.1	0.1	3.1	3.5	3.7
Viet Nam	2.8	3.5	3.6	0.1	0.1	0.1	2.9	3.8	4.1
AFRICA	**3.6**	**3.9**	**4.3**	**0.9**	**0.9**	**0.9**	**9.5**	**10.5**	**10.7**
Egypt	0.5	0.6	0.7	-	-	-	1.8	2.2	2.3
South Africa	1.1	1.1	1.2	0.1	0.1	0.1	1.8	1.9	1.9
CENTRAL AMERICA	**3.4**	**3.3**	**3.3**	**0.2**	**0.2**	**0.2**	**8.0**	**8.0**	**8.0**
Mexico	1.8	1.8	1.9	0.1	0.1	0.1	6.0	5.9	6.0
SOUTH AMERICA	**4.4**	**4.5**	**4.6**	**42.7**	**46.4**	**48.4**	**23.2**	**23.6**	**25.8**
Argentina	-	-	-	26.1	28.5	29.5	3.3	2.4	3.1
Bolivia	-	-	-	1.1	1.2	1.3	0.2	0.4	0.4
Brazil	0.3	0.2	0.1	12.5	14.1	14.7	14.0	14.6	15.9
Chile	0.9	1.0	0.9	0.5	0.4	0.4	1.3	1.3	1.4
Paraguay	-	-	-	0.8	0.8	1.0	0.4	0.5	0.5
Peru	0.7	0.8	0.9	1.4	1.1	1.3	0.9	1.1	1.2
Venezuela	1.2	1.1	1.1	-	-	-	1.3	1.3	1.3
NORTH AMERICA	**3.2**	**3.5**	**3.4**	**11.8**	**12.3**	**12.0**	**34.3**	**33.5**	**34.1**
Canada	1.3	1.2	1.2	2.7	3.8	3.7	2.2	1.9	2.2
United States of America	1.9	2.3	2.2	9.1	8.5	8.2	32.1	31.6	31.9
EUROPE	**31.5**	**32.1**	**33.3**	**4.4**	**5.1**	**5.6**	**61.4**	**62.7**	**63.7**
European Union	29.1	29.6	30.7	1.0	1.2	1.1	55.6	56.2	57.1
Russian Federation	0.6	0.6	0.6	1.0	0.8	1.3	3.0	3.6	3.7
Ukraine	0.1	0.1	0.1	1.9	2.6	2.6	0.4	0.3	0.3
OCEANIA	**2.0**	**2.4**	**2.4**	**0.2**	**0.2**	**0.2**	**2.6**	**3.2**	**3.3**
Australia	0.8	0.8	0.9	-	0.1	0.1	1.4	1.6	1.7
WORLD	**73.9**	**79.6**	**82.4**	**74.0**	**79.6**	**82.3**	**245.8**	**267.0**	**279.2**
Developing countries	33.2	37.1	38.7	57.3	61.9	64.4	136.7	157.0	167.2
Developed countries	40.7	42.5	43.7	16.6	17.7	18.0	109.0	110.1	112.0
LIFDCs	10.7	13.2	14.0	11.2	11.8	12.3	82.4	99.8	106.9
LDCs	0.5	0.5	0.5	0.4	0.4	0.4	3.4	3.6	3.6

[1] Expressed in product weight; 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	
	2010/11 *estim.*	2011/12 *f'cast*	2010/11 *estim.*	2011/12 *f'cast*	2010/11 *estim.*	2011/12 *f'cast*	2010/11 *estim.*	2011/12 *f'cast*
ASIA	**61.9**	**66.5**	**75.7**	**76.3**	**25.7**	**25.4**	**11.0**	**12.4**
China	12.8	13.1	16.2	16.4	2.4	3.5	0.1	0.2
India	24.7	28.3	24.2	24.2	1.0	-	1.1	2.4
Indonesia	2.6	2.7	5.4	5.4	2.8	3.0	-	-
Japan	0.6	0.9	2.3	2.3	1.7	1.5	-	-
Malaysia	-	-	1.4	1.4	1.7	1.5	0.2	0.2
Pakistan	3.6	3.5	4.5	4.5	0.6	0.7	0.1	-
Philippines	2.1	2.5	2.4	2.5	0.1	-	0.1	0.1
Thailand	10.3	10.1	2.7	2.7	-	-	6.3	6.7
Turkey	2.5	2.5	2.3	2.3	-	-	0.1	0.1
Viet Nam	1.2	1.3	1.5	1.5	0.3	0.2	-	-
AFRICA	**10.9**	**11.7**	**16.2**	**16.9**	**9.8**	**9.2**	**3.8**	**3.0**
Egypt	1.8	1.9	3.0	3.1	1.2	1.1	-	-
Ethiopia	0.3	0.3	0.5	0.5	0.2	0.2	-	-
Kenya	0.7	0.8	0.9	0.9	0.3	0.2	-	-
Mauritius	0.4	0.4	-	-	-	-	0.4	0.4
Mozambique	0.5	0.6	0.2	0.3	0.2	0.1	0.3	0.2
South Africa	2.4	2.5	1.7	1.8	0.3	0.3	1.0	0.6
Sudan	0.8	0.9	1.3	1.3	0.6	0.5	0.2	0.3
Swaziland	0.7	0.8	0.1	0.1	-	-	0.6	0.5
Tanzania, United Rep. of	0.3	0.3	0.5	0.5	0.2	0.2	0.1	-
CENTRAL AMERICA	**11.7**	**12.1**	**9.2**	**9.2**	**1.2**	**1.1**	**4.6**	**4.9**
Cuba	1.3	1.5	0.7	0.7	-	-	0.7	0.8
Dominican Republic	0.5	0.5	0.4	0.4	-	-	0.2	0.2
Guatemala	2.1	2.3	0.8	0.8	0.1	0.1	1.4	1.6
Mexico	5.4	5.4	5.4	5.3	0.7	0.6	1.0	1.4
SOUTH AMERICA	**47.2**	**44.2**	**21.5**	**21.9**	**1.3**	**1.3**	**26.3**	**23.4**
Argentina	2.5	2.2	2.0	2.0	-	-	0.4	0.1
Brazil	38.9	35.9	13.3	13.5	-	-	24.8	22.1
Colombia	2.5	2.5	1.7	1.8	-	-	0.8	0.7
Peru	1.1	1.2	1.2	1.3	0.2	0.1	-	0.1
Venezuela	0.7	0.7	1.2	1.3	0.4	0.4	-	-
NORTH AMERICA	**7.6**	**7.6**	**11.2**	**11.3**	**4.1**	**4.1**	**0.2**	**0.2**
United States of America	7.5	7.5	9.8	9.8	2.7	2.7	0.1	0.1
EUROPE	**22.8**	**26.6**	**28.9**	**29.6**	**8.3**	**6.1**	**2.4**	**1.1**
European Union	15.9	17.4	18.8	19.4	3.9	3.6	1.7	0.4
Russian Federation	3.3	5.1	5.8	5.9	2.5	1.2	0.1	0.1
Ukraine	1.9	2.4	2.1	2.2	0.4	0.3	0.1	0.1
OCEANIA	**4.1**	**4.4**	**1.4**	**1.5**	**0.3**	**0.3**	**2.8**	**3.2**
Australia	3.8	4.0	1.0	1.1	-	-	2.6	3.0
Fiji	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.2
WORLD	**166.3**	**173.1**	**164.1**	**166.6**	**50.8**	**47.5**	**51.3**	**48.1**
Developing countries	129.0	131.4	116.3	118.1	33.5	32.6	44.6	42.8
Developed countries	37.2	41.7	47.8	48.6	17.3	14.9	6.7	5.3
LIFDCs	56.1	61.1	72.2	73.3	20.5	19.7	5.0	5.3
LDCs	3.9	4.2	7.2	8.0	5.3	4.9	1.3	0.9

Table A14. Total meat statistics[1] *(thousand tonnes, carcass weight equivalent)*

	Production		Imports		Exports		Utilization	
	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*
ASIA	**121 631**	**123 618**	**12 869**	**13 875**	**3 716**	**3 993**	**130 784**	**133 500**
China	80 629	82 526	3 365	3 551	1 711	1 845	82 283	84 232
of which Hong Kong, SAR	174	177	1 983	2 173	758	803	1 399	1 547
India	6 612	6 797	4	4	790	877	5 825	5 924
Indonesia	2 691	2 695	134	133	5	5	2 820	2 824
Iran, Islamic Republic of	2 651	2 721	326	371	29	31	2 949	3 062
Japan	3 209	3 022	2 947	3 101	18	21	6 138	6 102
Korea, Republic of	2 021	1 794	858	1 109	18	12	2 860	2 891
Malaysia	1 335	1 359	248	253	36	38	1 547	1 574
Pakistan	2 418	2 367	5	5	40	37	2 382	2 335
Philippines	2 877	2 892	389	426	14	15	3 253	3 303
Saudi Arabia	774	788	850	918	16	16	1 608	1 689
Singapore	111	117	292	300	19	21	384	396
Thailand	2 180	2 177	9	10	686	730	1 502	1 457
Turkey	1 933	2 025	148	182	145	152	1 936	2 054
Viet Nam	3 486	3 522	811	880	33	38	4 264	4 364
AFRICA	**14 100**	**14 127**	**2 123**	**2 211**	**180**	**183**	**16 043**	**16 155**
Algeria	601	603	99	85	-	-	700	688
Angola	144	144	425	456	-	-	569	600
Egypt	1 256	1 251	416	393	6	7	1 665	1 638
Nigeria	1 357	1 372	3	2	-	-	1 360	1 375
South Africa	2 281	2 278	346	417	49	50	2 578	2 645
CENTRAL AMERICA	**8 414**	**8 558**	**2 557**	**2 636**	**393**	**448**	**10 577**	**10 747**
Cuba	298	303	238	260	-	-	535	563
Mexico	5 775	5 881	1 639	1 678	193	236	7 220	7 323
SOUTH AMERICA	**37 830**	**38 589**	**908**	**984**	**7 614**	**7 568**	**31 123**	**32 004**
Argentina	4 439	4 464	57	58	564	573	3 931	3 949
Brazil	24 543	25 107	39	40	6 055	6 044	18 528	19 103
Chile	1 380	1 395	262	286	245	257	1 397	1 424
Colombia	2 179	2 206	73	72	115	135	2 137	2 142
Uruguay	725	707	20	23	349	316	395	414
Venezuela	1 340	1 336	377	421	-	-	1 717	1 758
NORTH AMERICA	**46 599**	**46 877**	**2 271**	**2 193**	**8 376**	**8 709**	**40 494**	**40 361**
Canada	4 462	4 371	655	713	1 741	1 641	3 376	3 444
United States of America	42 135	42 505	1 595	1 459	6 634	7 068	37 097	36 895
EUROPE	**56 440**	**57 095**	**4 934**	**4 589**	**3 677**	**4 079**	**57 697**	**57 605**
Belarus	932	948	99	58	245	260	787	746
European Union	44 521	44 811	1 613	1 604	3 305	3 674	42 829	42 741
Russian Federation	6 879	7 134	2 391	2 243	39	33	9 231	9 345
Ukraine	2 097	2 181	305	141	13	34	2 388	2 288
OCEANIA	**5 823**	**5 790**	**389**	**385**	**2 507**	**2 439**	**3 705**	**3 735**
Australia	3 980	3 999	190	185	1 632	1 605	2 538	2 579
New Zealand	1 357	1 304	53	55	872	832	538	527
WORLD	**290 836**	**294 654**	**26 050**	**26 872**	**26 463**	**27 419**	**290 423**	**294 107**
Developing countries	173 805	176 878	14 693	15 681	11 816	12 103	176 681	180 457
Developed countries	117 032	117 775	11 357	11 191	14 647	15 316	113 742	113 650
LIFDCs	110 422	112 579	4 487	4 590	2 213	2 403	112 696	114 767
LDCs	8 299	8 362	1 098	1 167	5	5	9 392	9 525

[1] Including "other meat".

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

	Production		Imports		Exports		Utilization	
	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*
ASIA	**15 285**	**15 269**	**3 183**	**3 493**	**952**	**1 035**	**17 503**	**17 690**
China	5 617	5 517	434	520	121	120	5 929	5 917
India	2 610	2 740	1	1	716	800	1 895	1 941
Indonesia	454	440	120	120	1	1	574	560
Iran, Islamic Republic of	380	385	265	300	-	-	645	685
Japan	514	488	725	760	6	7	1 223	1 241
Korea, Republic of	247	262	366	420	2	1	608	641
Malaysia	28	29	155	165	7	8	176	186
Pakistan	1 470	1 435	4	3	25	20	1 448	1 418
Philippines	287	290	130	145	2	2	415	433
AFRICA	**5 036**	**5 033**	**628**	**553**	**101**	**106**	**5 563**	**5 480**
Algeria	129	130	95	80	-	-	224	210
Angola	87	87	70	65	-	-	157	152
Egypt	330	330	277	230	-	1	607	560
South Africa	780	760	33	35	8	7	805	788
CENTRAL AMERICA	**2 472**	**2 539**	**414**	**408**	**241**	**280**	**2 645**	**2 667**
Mexico	1 751	1 800	300	290	89	120	1 962	1 970
SOUTH AMERICA	**15 205**	**15 000**	**333**	**366**	**2 473**	**2 232**	**13 065**	**13 134**
Argentina	2 667	2 560	3	2	270	235	2 400	2 327
Brazil	9 389	9 305	31	33	1 492	1 343	7 928	7 995
Chile	215	220	177	186	7	7	385	399
Colombia	940	950	2	3	110	129	832	823
Uruguay	580	560	1	1	319	287	262	274
Venezuela	418	420	106	130	-	-	524	550
NORTH AMERICA	**13 320**	**13 166**	**1 222**	**1 130**	**1 567**	**1 669**	**12 978**	**12 656**
Canada	1 272	1 155	235	266	488	385	1 019	1 034
United States of America	12 048	12 011	983	860	1 079	1 284	11 955	11 618
EUROPE	**10 852**	**10 819**	**1 364**	**1 409**	**495**	**614**	**11 720**	**11 613**
European Union	7 895	7 927	436	450	338	450	7 993	7 927
Russian Federation	1 710	1 675	812	835	6	5	2 516	2 505
Ukraine	420	380	12	13	-	-	432	393
OCEANIA	**2 805**	**2 823**	**51**	**56**	**1 740**	**1 702**	**1 116**	**1 177**
Australia	2 129	2 182	10	10	1 255	1 242	884	950
New Zealand	656	622	10	12	484	458	182	176
WORLD	**64 975**	**64 648**	**7 195**	**7 415**	**7 569**	**7 638**	**64 590**	**64 417**
Developing countries	35 206	35 089	3 667	3 891	3 752	3 638	35 118	35 305
Developed countries	29 769	29 560	3 528	3 524	3 818	4 000	29 471	29 112
LIFDCs	16 610	16 628	887	885	1 088	1 195	16 408	16 318
LDCs	3 060	3 099	119	115	2	2	3 176	3 211

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

	Production		Imports		Exports		Utilization	
	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*
ASIA	**7 875**	**7 960**	**358**	**353**	**114**	**125**	**8 119**	**8 187**
Bangladesh	232	235	-	-	-	-	232	235
China	3 983	4 003	108	104	20	23	4 071	4 085
India	720	721	-	-	70	73	650	648
Iran, Islamic Republic of	490	500	10	11	-	-	500	510
Pakistan	430	435	-	-	12	14	418	421
Saudi Arabia	100	105	44	40	2	2	142	143
Syria	200	205	-	-	-	-	200	205
Turkey	300	302	1	1	-	-	301	303
AFRICA	**2 477**	**2 462**	**48**	**51**	**22**	**18**	**2 504**	**2 495**
Algeria	194	196	1	1	-	-	195	197
Nigeria	435	440	-	-	-	-	435	440
South Africa	131	130	8	9	-	-	139	139
Sudan	345	347	-	-	1	1	344	346
CENTRAL AMERICA	**123**	**124**	**30**	**24**	**-**	**-**	**153**	**148**
Mexico	97	98	18	12	-	-	115	110
SOUTH AMERICA	**313**	**315**	**7**	**6**	**32**	**33**	**288**	**288**
Brazil	111	113	6	6	-	-	117	119
NORTH AMERICA	**93**	**88**	**103**	**105**	**9**	**9**	**187**	**183**
United States of America	76	71	81	83	9	9	148	145
EUROPE	**1 070**	**1 065**	**258**	**235**	**20**	**19**	**1 308**	**1 281**
European Union	768	760	239	215	13	12	994	963
Russian Federation	185	187	9	9	-	-	194	196
OCEANIA	**1 079**	**1 000**	**42**	**41**	**650**	**620**	**471**	**421**
Australia	608	554	1	2	295	280	315	275
New Zealand	470	445	5	5	355	340	120	111
WORLD	**13 031**	**13 013**	**846**	**814**	**848**	**824**	**13 029**	**13 004**
Developing countries	10 132	10 200	444	432	167	175	10 409	10 458
Developed countries	2 899	2 813	402	382	681	649	2 620	2 546
LIFDCs	8 530	8 593	124	125	100	106	8 555	8 612
LDCs	1 593	1 613	10	11	1	1	1 602	1 623

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

	Production		Imports		Exports		Utilization	
	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*
ASIA	**61 918**	**62 639**	**2 936**	**3 280**	**529**	**579**	**64 370**	**65 338**
China	52 011	53 053	894	976	459	503	52 447	53 526
of which Hong Kong, SAR	114	116	544	580	164	175	494	521
India	485	490	1	1	1	1	485	490
Indonesia	670	680	3	2	1	-	672	682
Japan	1 291	1 200	1 218	1 280	1	1	2 505	2 481
Korea, D.P.R.	190	195	1	2	-	-	191	197
Korea, Republic of	1 110	835	358	562	-	-	1 515	1 397
Malaysia	205	208	20	10	5	5	220	213
Philippines	1 731	1 737	151	150	3	3	1 879	1 884
Thailand	700	650	1	2	17	18	684	634
Viet Nam	2 578	2 620	42	43	33	38	2 587	2 621
AFRICA	**1 173**	**1 187**	**201**	**210**	**9**	**10**	**1 365**	**1 387**
Madagascar	55	55	-	-	-	-	55	55
Nigeria	225	227	-	-	-	-	225	227
South Africa	320	325	34	35	4	4	351	356
Uganda	110	115	-	-	-	-	110	115
CENTRAL AMERICA	**1 671**	**1 696**	**773**	**812**	**104**	**114**	**2 340**	**2 394**
Cuba	182	185	30	32	-	-	212	217
Mexico	1 165	1 182	596	620	86	95	1 675	1 707
SOUTH AMERICA	**5 023**	**5 094**	**111**	**121**	**757**	**730**	**4 377**	**4 486**
Argentina	245	250	42	43	2	2	285	291
Brazil	3 226	3 258	1	-	635	597	2 592	2 661
Chile	518	522	10	15	120	130	408	407
Colombia	190	200	11	11	-	-	201	211
Venezuela	174	178	15	16	-	-	189	194
NORTH AMERICA	**12 115**	**12 229**	**624**	**623**	**2 839**	**3 144**	**9 950**	**9 681**
Canada	1 928	1 950	189	200	1 049	1 050	1 068	1 100
United States of America	10 187	10 279	430	418	1 790	2 094	8 877	8 576
EUROPE	**26 827**	**26 889**	**1 284**	**1 200**	**1 866**	**2 009**	**26 245**	**26 079**
Belarus	385	390	82	39	74	75	393	354
European Union	22 544	22 540	32	19	1 752	1 880	20 824	20 679
Russian Federation	2 260	2 310	854	875	13	10	3 101	3 175
Serbia	500	480	43	43	7	7	536	516
Ukraine	631	650	136	83	1	16	766	717
OCEANIA	**475**	**483**	**223**	**217**	**39**	**40**	**659**	**659**
Australia	335	342	170	163	38	39	467	466
Papua New Guinea	68	68	6	7	-	-	74	75
WORLD	**109 203**	**110 217**	**6 153**	**6 463**	**6 143**	**6 626**	**109 306**	**110 025**
Developing countries	67 975	68 890	2 722	3 059	1 394	1 427	69 350	70 518
Developed countries	41 228	41 326	3 431	3 404	4 749	5 199	39 956	39 507
LIFDCs	55 767	56 840	849	870	381	415	56 235	57 295
LDCs	1 191	1 217	143	150	1	1	1 333	1 366

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

	Production		Imports		Exports		Utilization	
	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*	2010 *estim.*	2011 *f'cast*
ASIA	**34 626**	**35 788**	**6 284**	**6 636**	**2 087**	**2 221**	**38 822**	**40 209**
China	17 601	18 502	1 922	1 945	1 093	1 183	18 431	19 264
of which Hong Kong, SAR	45	45	1 147	1 264	550	600	642	709
India	2 650	2 700	1	2	2	2	2 649	2 700
Indonesia	1 435	1 438	6	6	-	-	1 441	1 444
Iran, Islamic Republic of	1 765	1 820	50	60	28	30	1 787	1 850
Japan	1 392	1 322	965	1 020	11	13	2 346	2 329
Korea, Republic of	653	686	122	115	16	11	759	790
Kuwait	44	44	250	270	1	1	293	314
Malaysia	1 100	1 120	51	55	24	25	1 127	1 150
Saudi Arabia	590	600	684	750	3	3	1 271	1 347
Singapore	95	100	135	132	9	10	221	222
Thailand	1 208	1 260	2	2	659	700	551	568
Turkey	1 300	1 400	95	100	143	150	1 252	1 350
Yemen	145	148	104	105	-	-	249	253
AFRICA	**3 998**	**4 046**	**1 216**	**1 367**	**40**	**42**	**5 175**	**5 371**
Angola	8	8	250	280	-	-	258	288
South Africa	1 028	1 040	270	338	31	33	1 267	1 345
CENTRAL AMERICA	**4 028**	**4 081**	**1 319**	**1 375**	**46**	**52**	**5 301**	**5 404**
Cuba	34	34	200	220	-	-	234	254
Mexico	2 659	2 699	709	745	17	20	3 352	3 424
SOUTH AMERICA	**17 047**	**17 855**	**456**	**488**	**4 285**	**4 507**	**13 218**	**13 837**
Argentina	1 346	1 472	11	13	250	293	1 107	1 192
Brazil	11 787	12 400	1	1	3 904	4 080	7 884	8 321
Chile	620	625	75	85	107	108	588	602
Venezuela	740	730	255	275	-	-	995	1 005
NORTH AMERICA	**20 820**	**21 098**	**311**	**324**	**3 923**	**3 848**	**17 240**	**17 615**
Canada	1 223	1 227	206	223	186	186	1 243	1 265
United States of America	19 597	19 871	94	90	3 737	3 662	15 986	16 339
EUROPE	**16 499**	**17 127**	**1 868**	**1 582**	**1 211**	**1 352**	**17 156**	**17 357**
European Union	12 272	12 542	806	820	1 120	1 250	11 958	12 112
Russian Federation	2 635	2 872	675	480	19	17	3 291	3 335
Ukraine	1 001	1 106	156	44	12	18	1 145	1 132
OCEANIA	**1 049**	**1 067**	**69**	**67**	**36**	**36**	**1 081**	**1 097**
Australia	886	900	7	9	30	30	863	877
New Zealand	140	144	1	-	6	6	135	139
WORLD	**98 067**	**101 063**	**11 523**	**11 839**	**11 628**	**12 058**	**97 992**	**100 889**
Developing countries	56 565	58 674	7 714	8 151	6 399	6 760	57 880	60 071
Developed countries	41 502	42 388	3 809	3 688	5 230	5 298	40 112	40 818
LIFDCs	26 253	27 235	2 589	2 671	611	656	28 230	29 249
LDCs	1 821	1 808	802	865	-	-	2 622	2 673

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

	Production			Imports			Exports		
	2007-2009 average	2010 estim.	2011 f'cast	2007-2009 average	2010 estim.	2011 f'cast	2007-2009 average	2010 estim.	2011 f'cast
ASIA	**246.5**	**259.0**	**269.0**	**21.0**	**25.2**	**26.7**	**5.5**	**4.8**	**4.8**
China	39.9	43.4	46.3	2.4	4.7	5.6	0.5	0.1	0.1
India[1]	108.1	116.6	121.7	0.1	0.4	0.4	0.4	0.2	0.3
Indonesia	1.1	1.3	1.4	1.5	1.6	1.6	0.3	0.2	0.1
Iran, Islamic Republic of	7.8	8.0	8.1	0.5	0.5	0.5	0.1	0.2	0.2
Japan	8.0	7.7	7.6	1.4	1.3	1.3	-	-	-
Korea, Republic of	2.2	2.2	2.2	0.4	0.6	0.8	-	-	-
Malaysia	-	0.1	0.1	1.2	1.1	1.1	0.4	0.3	0.2
Pakistan	33.3	31.6	32.0	0.2	0.3	0.3	-	-	-
Philippines	-	-	-	1.2	1.3	1.4	0.3	0.3	0.3
Saudi Arabia	1.7	1.6	1.6	2.1	2.0	2.0	1.3	1.3	1.4
Singapore	-	-	-	1.3	1.5	1.5	0.7	0.6	0.6
Thailand	0.8	0.9	0.9	0.8	0.9	1.1	0.1	0.1	0.1
Turkey	12.4	13.2	13.9	0.2	0.2	0.2	0.1	0.2	0.2
AFRICA	**38.1**	**39.1**	**38.9**	**7.9**	**9.4**	**9.6**	**0.8**	**1.2**	**1.2**
Algeria	2.1	2.0	2.0	2.2	2.2	3.1	0.8	1.2	1.2
Egypt	6.0	6.1	6.1	0.8	1.4	2.2	0.4	0.8	0.8
Kenya	4.3	4.4	4.3	-	-	-	-	-	-
South Africa	3.1	3.2	3.2	0.1	0.1	0.1	0.1	0.1	0.1
Sudan	7.4	7.5	7.5	0.3	0.3	0.3	-	-	-
Tunisia	1.1	1.2	1.2	0.1	0.2	0.2	0.1	0.1	0.1
CENTRAL AMERICA	**16.0**	**16.7**	**16.9**	**4.0**	**3.6**	**3.8**	**0.5**	**0.5**	**0.6**
Costa Rica	0.9	0.9	1.0	-	-	-	0.1	0.1	0.2
Mexico	10.7	11.0	11.1	2.2	2.0	2.3	0.1	0.1	0.2
SOUTH AMERICA	**58.8**	**62.7**	**63.7**	**1.9**	**1.6**	**2.2**	**3.0**	**2.9**	**3.3**
Argentina	10.2	10.6	11.6	-	0.1	0.1	1.4	1.5	2.0
Brazil	27.7	30.4	29.8	0.4	0.5	0.7	0.5	0.2	0.1
Colombia	7.2	7.4	7.4	-	-	-	0.1	-	-
Uruguay	1.7	1.5	1.7	-	-	-	0.7	0.8	0.7
Venezuela	2.0	2.5	2.7	1.1	0.6	0.8	-	-	-
NORTH AMERICA	**93.6**	**95.7**	**97.0**	**2.2**	**1.4**	**1.3**	**3.7**	**4.8**	**5.1**
Canada	8.2	8.3	8.3	0.4	0.3	0.3	0.2	0.1	0.1
United States of America	85.4	87.5	88.8	1.7	1.1	1.0	3.5	4.6	5.0
EUROPE	**214.9**	**215.7**	**216.4**	**4.3**	**4.9**	**4.9**	**13.2**	**15.5**	**16.4**
Belarus	6.2	6.6	6.9	-	-	-	1.9	2.4	2.6
European Union	153.2	154.9	156.4	1.2	1.0	0.9	9.7	11.7	12.5
Russian Federation	32.4	31.9	31.2	2.2	3.0	3.0	0.2	0.2	0.1
Ukraine	11.9	11.2	10.8	0.1	0.1	0.1	0.8	0.6	0.6
OCEANIA	**24.9**	**24.7**	**25.7**	**0.8**	**0.9**	**0.8**	**15.7**	**17.4**	**18.0**
Australia[2]	9.4	9.0	9.3	0.5	0.6	0.6	3.5	3.1	3.2
New Zealand[3]	15.4	15.6	16.3	0.1	0.1	0.1	12.2	14.3	14.9
WORLD	**692.6**	**713.6**	**727.6**	**42.2**	**46.9**	**49.4**	**42.2**	**47.0**	**49.5**
Developing countries	329.7	347.4	358.6	32.7	37.6	40.2	9.5	9.2	9.8
Developed countries	363.0	366.1	369.7	9.4	9.3	9.2	32.7	37.8	39.7
LIFDCs	249.6	262.3	271.5	12.6	17.2	17.3	4.4	4.6	4.9
LDCs	26.1	27.2	27.8	2.7	3.2	3.1	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		
	2008	2009	2008	2009	2009	2010 estim.	2011 f'cast.	2009	2010 estim.	2011 f'cast.
	Million tonnes (live weight equivalent)				USD billion			USD billion		
ASIA	**46.4**	**46.7**	**47.0**	**49.5**	**33.8**	**39.7**	**44.6**	**29.7**	**35.3**	**39.2**
China[2]	16.0	15.8	33.1	35.1	12.2	15.2	17.9	8.4	10.2	11.4
of which: Hong Kong SAR	0.2	0.2	-	-	0.4	0.5	0.5	2.5	3.0	3.4
Taiwan Prov.	1.0	0.8	0.3	0.3	1.6	1.5	1.7	0.8	0.9	0.9
India	4.1	4.1	3.9	3.8	2.0	2.4	2.5	0.1	0.1	0.1
Indonesia	5.0	5.1	1.7	1.7	2.2	2.6	2.8	0.2	0.3	0.4
Japan	4.3	3.8	0.7	0.8	1.8	1.9	2.0	13.2	14.9	16.3
Korea, Rep. of	1.9	1.9	0.5	0.5	1.3	1.6	1.9	2.7	3.2	3.7
Philippines	2.6	2.6	0.7	0.7	0.6	0.6	0.6	0.2	0.2	0.2
Thailand	1.9	1.7	1.3	1.4	6.2	7.1	8.3	1.9	2.1	2.6
Viet Nam	2.1	2.2	2.5	2.6	4.3	4.4	4.5	0.4	0.4	0.4
AFRICA	**7.3**	**7.2**	**0.9**	**1.0**	**4.5**	**5.0**	**5.0**	**3.4**	**3.5**	**3.7**
Ghana	0.4	0.3	-	-	0.1	-	-	0.1	0.1	0.2
Morocco	1.0	1.2	-	-	1.5	1.5	1.5	0.1	0.1	0.1
Namibia	0.4	0.4	-	-	0.5	0.5	0.5	-	-	-
Nigeria	0.6	0.6	0.1	0.2	0.1	0.3	0.3	0.8	1.0	1.1
Senegal	0.4	0.5	-	-	0.2	0.2	0.3	-	-	-
South Africa	0.6	0.5	-	-	0.4	0.6	0.6	0.3	0.2	0.2
CENTRAL AMERICA	**2.1**	**2.1**	**0.3**	**0.3**	**2.0**	**1.8**	**1.8**	**1.0**	**1.2**	**1.3**
Mexico	1.6	1.6	0.2	0.2	0.8	0.8	0.8	0.4	0.5	0.6
Panama	0.2	0.2	-	-	0.4	0.2	0.1	-	-	-
SOUTH AMERICA	**13.9**	**13.2**	**1.5**	**1.6**	**9.4**	**9.9**	**11.3**	**1.9**	**2.3**	**2.6**
Argentina	1.0	0.9	-	-	1.1	1.3	1.5	0.1	0.1	0.1
Brazil	0.8	0.8	0.4	0.4	0.2	0.2	0.2	0.7	1.0	1.2
Chile	3.6	3.5	0.8	0.8	3.6	3.4	4.0	0.1	0.3	0.3
Ecuador	0.5	0.5	0.2	0.2	1.6	1.8	2.1	0.2	0.2	0.3
Peru	7.4	6.9	-	-	2.2	2.5	2.9	0.1	0.2	0.2
NORTH AMERICA	**5.5**	**5.4**	**0.7**	**0.6**	**7.7**	**9.0**	**10.0**	**15.9**	**17.8**	**20.3**
Canada	0.9	0.9	0.2	0.2	3.2	4.0	4.1	2.0	2.3	2.5
United States of America	4.3	4.2	0.5	0.5	4.1	4.7	5.5	13.9	15.5	17.9
EUROPE	**13.0**	**13.3**	**2.3**	**2.5**	**36.1**	**39.7**	**44.3**	**45.7**	**48.6**	**55.2**
European Union[2]	5.1	5.2	1.2	1.3	23.9	25.7	29.1	40.7	43.3	49.5
of which Extra -EU					3.8	4.4	5.0	21.4	23.0	26.7
Iceland	1.3	1.1	-	-	1.7	1.8	2.0	0.1	0.1	0.1
Norway	2.4	2.5	0.8	1.0	7.1	8.8	9.6	1.2	1.1	1.2
Russian Federation	3.4	3.8	0.1	0.1	2.3	2.3	2.5	2.0	2.3	2.5
OCEANIA	**1.2**	**1.2**	**0.2**	**0.2**	**2.2**	**2.4**	**2.7**	**1.3**	**1.5**	**1.6**
Australia	0.2	0.2	0.1	0.1	0.8	0.9	1.1	1.1	1.2	1.4
New Zealand	0.5	0.4	0.1	0.1	0.9	1.1	1.2	0.1	0.1	0.1
WORLD[3]	**89.6**	**89.1**	**52.9**	**55.7**	**95.7**	**107.5**	**119.7**	**98.8**	**110.1**	**123.9**
Excl. Intra-EU					75.5	86.2	95.6	79.6	89.8	101.2
Developing countries	66.0	65.9	49.1	51.6	48.3	54.9	61.5	22.8	27.5	30.8
Developed countries	23.5	23.1	3.9	4.1	47.4	52.6	58.2	76.0	82.6	93.2
LIFDCs	20.0	20.4	8.7	8.7	7.9	9.1	9.6	3.3	3.5	3.8
LDCs	8.1	8.5	1.9	2.1	1.4	1.4	1.6	0.3	0.4	0.4

[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 65 495 tonnes in 2008 and 60 162 in 2009 of not identified countries, data not included in any other aggregates.

Table A21. Selected international prices for 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
2010/11	316	289	311	254	260	274	247	248
2010 – October	291	266	294	236	248	263	264	231
2010 – November	291	276	295	236	246	260	238	234
2010 – December	327	310	300	252	260	274	233	251
2011 – January	340	317	317	263	272	296	251	262
2011 – February	362	336	347	287	288	294	273	276
2011 – March	334	302	348	291	288	272	254	279
2011 – April	364	318	352	321	314	276	250	302
2011 – May	362	309	351	309	303	277	247	277
2011 – June	333	282	341	308	306	285	265	285
2011 – July	307	264	310	304	300	270	259	279
2011 – August	336	280	292	313	312	287	265	304
2011 - September	329	270	300	300	295	279	254	285
2011 – October	301	255	260	275	276	266	237	265

[1] Delivered United States f.o.b. Gulf
[2] Delivered United States Gulf
[3] 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. 2011	Dec. 2010	March 2012	March 2011	May 2012	May 2011	July 2012	July 2011
Wheat								
Sept 23	235	256	248	268	254	271	256	268
Sept 30	224	248	238	260	246	264	249	262
Oct 7	223	242	237	255	246	261	250	260
Oct 13	227	258	240	271	249	276	255	276
Oct 20	232	251	244	264	251	272	257	275
Oct 27	237	258	250	272	258	279	264	283
Maize								
Sept 23	251	197	257	202	260	204	261	205
Sept 30	233	195	238	200	242	202	244	204
Oct 7	236	196	241	200	244	202	246	203
Oct 13	251	224	256	228	262	230	260	231
Oct 20	256	226	260	230	262	233	263	234
Oct 27	256	227	261	232	263	235	264	236

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)*				
						Indica			
	Thai 100% B[1]	Thai broken [2]	US long grain [3]	Pakisan Basmati[4]	Total	High quality	Low quality	Japonica	Aromatic
Annual (Jan/Dec)									
2005	291	219	319	473	125	124	128	127	108
2006	311	217	394	516	137	135	129	153	117
2007	335	275	436	677	161	156	159	168	157
2008	695	506	782	1077	295	296	289	314	251
2009	587	329	545	937	253	229	197	341	232
2010	518	386	510	881	229	211	213	264	231
Monthly									
2010 – October	509	431	496	1 020	249	217	235	296	250
2010 – November	541	430	573	1 200	257	233	243	294	261
2010 – December	564	423	600	1 150	256	240	243	288	251
2011 – January	542	412	601	1 150	253	237	240	288	240
2011 – February	554	433	582	1 150	255	235	238	299	237
2011 – March	524	429	562	1 150	248	227	237	284	237
2011 – April	507	423	528	1 150	245	218	235	284	235
2011 – May	500	419	518	1 025	242	219	239	273	225
2011 – June	519	421	529	938	247	222	242	288	218
2011 – July	548	445	549	910	251	232	255	276	220
2011 – August	582	471	605	875	260	249	272	273	220
2011 – September	618	497	650	950	261	256	272	268	226
2011 – October	620	505	639	950	255	255	261	260	228

[1] White rice, 100 percent second grade, f.o.b. Bangkok.
[2] A1 super, f.o.b. Bangkok.
[3] United States No.2, 4 percent brokens 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 brokens. 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	1 325	1 050	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
2010/11	549	1 308	1 147	418	279	215	254	221
Monthly								
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	1 002	901	389	245	175	192	213
2010 - September	468	1 036	910	398	277	180	198	218
2010 - October	496	1 165	998	415	285	193	220	227
2010 - November	526	1 248	1 117	430	292	205	243	225
2010 - December	550	1 321	1 229	437	289	216	263	222
2011 - January	572	1 384	1 279	454	313	225	278	234
2011 - February	569	1 366	1 286	447	290	224	279	241
2011 - March	552	1 305	1 172	423	264	217	260	234
2011 - April	553	1 310	1 148	406	277	219	259	227
2011 - May	556	1 291	1 155	403	280	218	259	220
2011 - June	559	1 321	1 137	396	289	219	257	211
2011 - July	558	1 345	1 100	405	262	217	251	209
2011 - August	557	1 327	1 080	402	248	214	244	206
2011 - September	546	1 310	1 065	396	255	209	238	200
2011 - October	502	1 216	995	378	243	194	223	194

[1] Soybeans: US, No.2 yellow, c.i.f. Rotterdam.
[2] Soybean oil: Dutch, fob 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 sugar and sugar price index

	I.S.A. average of daily prices	ISO (Euronext, Liffe) white sugar price index	FAO sugar price index (2002/04 = 100)
	Raw Sugar	White	
Annual (Jan/Dec)	*(US cents/lb)*		
2005	9.9	13.2	140.3
2006	14.8	19.0	209.6
2007	10.1	14.0	143.0
2008	12.8	16.1	181.6
2009	18.1	22.2	257.3
2010	21.3	27.2	302.0
Monthly			
September, 2010	22.5	27.3	318.1
October, 2010	24.6	31.0	349.3
November, 2010	26.4	32.6	373.4
December, 2010	28.0	33.9	398.4
January, 2011	29.6	36.4	420.2
February, 2011	29.5	33.8	418.2
March, 2011	26.2	31.8	372.3
April, 2011	24.4	29.7	345.7
May, 2011	22.0	27.2	312.2
June, 2011	25.2	31.2	357.7
July, 2011	28.2	34.9	400.4
August, 2011	27.7	33.4	393.7
September, 2011	26.7	31.5	379.0
October, 2011	25.5	30.7	361.4

Table A26. 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)					
2005	2 128	2 223	2 261	2 838	135
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
2010	4 043	3 127	3 464	4 010	200
Monthly					
2010 - October	4 275	3 175	3 463	4 013	203
2010 - November	4 500	3 050	3 513	4 175	208
2010 - December	4 500	3 075	3 550	4 175	208
2011 - January	4 625	3 500	3 801	4 375	221
2011 - February	4 825	3 850	4 169	4 400	230
2011 - March	4 883	3 833	4 592	4 417	234
2011 - April	4 750	3 769	4 088	4 425	229
2011 - May	4 750	3 807	4 075	4 500	231
2011 - June	4 763	4 000	3 938	4 488	232
2011 - July	4 675	3 853	3 825	4 462	228
2011 - August	4 500	3 622	3 585	4 405	221
2011 - September	4 225	3 476	3 522	4 332	215
2011 - October	4 075	3 346	3 475	4 029	204

[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 maximum 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 A27. Selected international meat prices and FAO meat price indices

	Bovine meat prices (USD per tonne)			Ovine meat price (USD per tonne)	Pig meat prices (USD per tonne)		
Period	Australia	United States	Brazil	New Zealand	United States	Brazil	Germany
Annual (Jan/Dec)							
2005	2 617	3 919	1 967	4 439	2 161	2 094	1 830
2006	2 547	3 803	2 219	4 033	1 986	2 134	1 935
2007	2 603	4 023	2 367	4 120	2 117	2 200	1 907
2008	3 138	4 325	3 785	4 585	2 270	3 000	2 364
2009	2 636	3 897	3 118	4 276	2 202	2 223	2 035
2010	3 351	4 378	3 919	5 045	2 454	2 747	1 913
Monthly							
2010 - August	3 365	4 653	3 941	5 283	2 576	2 680	1 976
2010 - September	3 351	4 424	4 039	5 334	2 460	2 708	1 897
2010 - October	3 412	4 372	4 322	5 503	2 528	2 761	1 960
2010 - November	3 439	4 272	4 576	5 536	2 455	2 952	1 973
2010 - December	3 744	4 468	4 663	6 107	2 397	2 926	1 977
2011 - January	4 100	4 334	4 667	6 276	2 404	3 002	1 744
2011 - February	4 050	4 528	4 719	6 414	2 493	2 820	1 977
2011 - March	4 140	4 594	4 746	6 424	2 561	2 927	2 120
2011 - April	4 250	4 452	4 857	6 622	2 694	3 085	2 305
2011 - May	4 030	4 438	5 006	6 660	2 701	3 033	2 300
2011 - June	3 900	4 508	4 791	6 772	2 717	3 124	2 299
2011 - July	3 950	4 263	4 852	6 907	2 611	2 836	2 296
2011 - August	3 990	4 508	4 997	6 995	2 679	2 971	2 267

Bovine meat prices:
Australia: up to Oct02 : cow forequarters frozen boneless, 85% chemical lean, cif US port (East Coast) ex-dock; from Nov02: chucks and cow forequarters
USA: Frozen beef, export unit value
Brazil: Frozen beef, export unit value

Ovine meat prices
New Zealand: Lamb, frozen whole carcasses,wholesale price Smithfield Mkt. London

Pig meat prices:
USA: Frozen pigmeat, export unit value
Brazil: Frozen pigmeat, export unit value
Germany: Monthly market price for pig carcase grade E

Table A28. Selected international meat prices and FAO meat price indices

	Poultry meat prices (USD per tonne)		FAO indices (2002-2004=100)				
Period	United States	Brazil	Total meat	Bovine meat	Ovine meat	Pig meat	Poultry meat
Annual (Jan/Dec)							
2005	847	1 228	120	118	113	122	132
2006	734	1 180	119	119	103	123	122
2007	935	1 443	125	125	105	125	151
2008	997	1 896	153	157	117	152	184
2009	989	1 552	133	134	109	131	162
2010	1 032	1 781	152	163	128	138	177
Monthly							
2010 - August	996	1 769	156	167	134	141	176
2010 - September	993	1 750	153	165	136	137	175
2010 - October	1 017	1 813	158	170	140	141	180
2010 - November	1 069	1 940	161	172	141	142	192
2010 - December	1 031	1 966	166	181	155	141	191
2011 - January	1 067	1 992	167	185	160	134	195
2011 - February	1 066	1 983	171	188	163	141	194
2011 - March	1 102	2 023	175	190	163	148	199
2011 - April	1 182	2 120	180	192	169	159	210
2011 - May	1 177	2 194	180	190	170	158	215
2011 - June	1 143	2 115	178	186	172	159	207
2011 - July	1 133	2 154	177	185	176	154	209
2011 - August	1 144	2 008	179	190	178	155	201

Poultry meat prices:
USA: Broiler cuts, export unit value
Brazil: Export unit value for chicken (f.o.b.)

The FAO Meat Price Indices consist of 3 poultry meat product quotations (the average weighted by assumed fixed trade weights), 4 bovine meat product quotations (average weighted by assumed fixed trade weights), 2 pig meat product quotations (average weighted by assumed fixed trade weights), 1 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 A29. Fish price indices (2002 - 2004 = 100)

Period	Total	Aquaculture	Capture	White fish	Salmon	Shrimp	Pelagic e/tuna	Tuna	Other fish
Annual (Jan/Dec)									
2005	96	92	99	98	91	97	118	94	89
2006	102	99	105	110	109	98	112	102	93
2007	109	100	116	119	110	101	118	116	98
2008	119	104	130	130	114	108	134	139	104
2009	109	103	114	113	120	96	126	126	98
2010	119	119	119	121	141	107	130	125	110
Monthly									
2010 - October	148	147	148	148	196	125	169	154	152
2010 - November	145	145	145	146	192	127	174	139	147
2010 - December	149	151	147	143	203	128	172	151	152
2011 - January	148	151	146	143	203	122	160	152	155
2011 - February	151	152	150	143	207	122	160	161	164
2011 - March	157	157	157	151	216	121	164	173	173
2011 - April	155	161	150	149	225	119	173	163	171
2011 - May	153	160	148	153	222	116	133	167	169
2011 - June	152	153	151	153	204	122	165	166	162
2011 - July	152	148	155	153	194	121	157	178	167
2011 - August	149	144	155	155	180	119	160	177	165
2011 - September	150	142	159	154	176	118	162	178	165
2011 - October	150	139	161	152	172	119	162	178	162

Source= Norwegian Seafood Export Council

Note: The FAO Fish Price Index is based on nominal import values expressed in CIF in the three major import markets; Japan, USA and EU. Separate indexes exist for products from aquaculture and from capture fisheries. Additional sub-indexes exist for the major commodity groups based on species.

Table A30. Selected international commodity prices

	Currency and unit	Effective date	Latest quotation	One month ago	One year ago	Average 2006-2010
Sugar (ISA daily price)	US cents per lb	26-10-11	25.58	24.32	25.82	15.41
Coffee (ICO daily price)	US cents per lb	26-10-11	194.93	213.04	161.56	118.12
Cocoa (ICCO daily price)	US cents per lb	26-10-11	123.60	130.36	132.79	110.18
Tea (FAO Tea Composite Price)	USD per kg	28-10-11	2.64	2.82	2.94	2.33
Cotton (NYBOT) [1]	US cents per lb	21-10-11	99.72	101.27	117.23	66.48
Jute "BTD" (Fob Bangladesh Port)	USD per tonne	30-09-11	620.00	650.00	820.00	522.50

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

THE 2011 PRICE PEAKS IN THE MAIZE, WHEAT AND SOYBEAN FUTURES MARKETS: AN UPDATE ON INVESTOR PARTICIPATION

(Article by Frank S. Rose, College of Business, Lewis University, Romeoville, Illinois, United States)

INTRODUCTION

The June 2011 issue of the Food Outlook included an article comparing investor participation in the CBOT's maize, wheat and soybean futures and options markets during the sharp price rises of 2008 and 2011 (Rose, 2011). When the article was written, 2011 prices had fallen from their highest levels of the year, but it was unclear whether or not prices would exhibit a rapid and extended decline from the peaks, as had happened in 2008. As it turned out, prices did not establish a prolonged downward trend, as in 2008, but rather moved in a more or less sideways manner with significant volatility (Figure 1). However, in September, prices of all three markets dropped significantly. This update extends the analysis presented in the June article to the recent period, focusing on market positions of swap dealers and money managers, but also examining the changes in positions held by traditional hedgers.

INVESTOR PARTICIPATION IN THE MARKETS DURING THE 2008 AND 2011 PRICE RISES

The analysis in the June article led to five conclusions:

1. Net short positions of the traditional risk managers, i.e. producers, merchants, processors and users of the underlying products, grew larger as prices rose and declined as prices fell. This is consistent with the practice of commercial entities having cash products to sell establishing short hedges during periods of price rises to "lock-in" higher prices for the eventual sale of their products.
2. Long and net long positions of swap dealers and money managers generally increased as prices rose and declined as prices fell. However, this pattern was not universally true and not as clear cut in 2011 as in 2008.
3. Long and net long positions of the investor groups were generally somewhat greater during periods around the 2011 price peaks than during the 2008 peaks. Again, this pattern was not observed in all cases.
4. Some evidence indicated that investors reduced their long positions more rapidly following the price peaks than they increased them prior to the peaks.
5. Money managers' positions were somewhat more volatile than those of swap dealers. This might be expected as for example, the money manager category includes fewer passive, long-only investors than the swap dealer category and, as a group, would likely change its positions more frequently in pursuit of profit.

The period examined in the June article extended to a month after the 2011 price spikes in maize (USD 327.70/tonne in April), wheat (USD 358.60/tonne in February), and soybeans (USD 557.03/tonne in February). This article focuses on the period since then.

MAIZE, WHEAT AND SOYBEAN PRICE PATTERNS BEFORE AND AFTER THE 2011 PEAKS

Figure 1 shows cash prices for maize, wheat and soybeans over the past five years. Market analysts have cited a number of factors influencing United States prices over this period, including the global economic slowdown, production issues, global competition, levels of stocks and the activities of commodity investors. Highlights of the 2011 price run-ups, subsequent volatility, and recent declines for three commodities are as follows.

Maize

Maize prices began their upward trend in June 2010 with prices around USD 149.50/tonne and peaked initially at USD 327.70/tonne in April 2011. After a brief decline, prices rose to a new high, USD 334.40/tonne in early June. Prices dropped again but rose to USD 329.70/tonne at the end of August before falling to USD 256.80 in early October.

Wheat

Wheat prices moved steadily upward from USD 154.90/tonne in September 2009 to a high of USD 358.60/tonne in February 2011. Unlike maize, wheat did not establish new highs and, in fact, prices have generally trended downward since February but with significant volatility. At the end of August, prices were at USD 292.60/tonne but fell to USD 250.20/tonne in October.

Figure 1. Maize cash price (US No.2 Yellow, fob Gulf, October 2006 - October 2011)

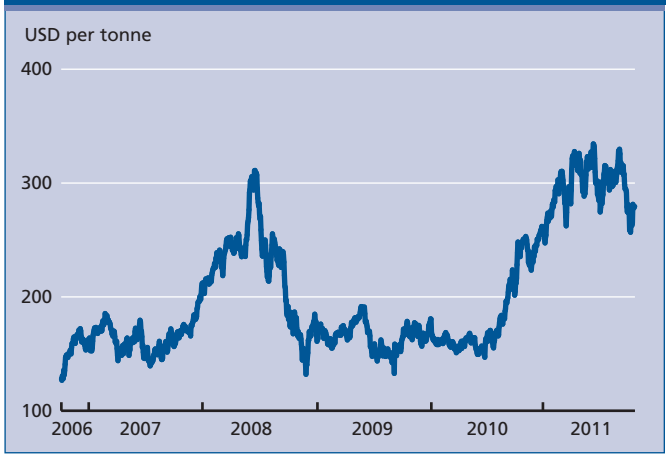

Figure 1. Wheat cash price (US No.2 soft red, fob Gulf, October 2006 - October 2011)

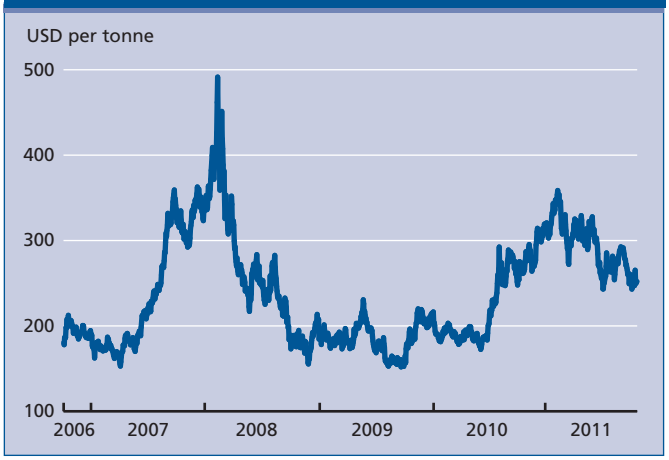

Figure 1. Soybeans cash price (US No.1 Yellow, fob Gulf, October 2006 - October 2011)

Soybeans

The upward price trend for soybeans began in January 2010 when prices were at USD 351.63/tonne. Prices peaked at USD 557.03 in February 2011, fell for a time, and subsequently rose to USD 548.21/tonne in May and to USD 554.27/tonne in August. As with maize and wheat, soybean prices fell sharply in September and reached USD 441.84/tonne in early October.

ANALYSIS OF MARKET PARTICIPATION BEFORE AND AFTER THE 2011 PRICE PEAKS

The analysis in June examined the long upward trend in prices leading to peaks in 2011. The analysis here contrasts the positions of market participants during that long uptrend with the subsequent period where prices were volatile and trends in the three markets were not as clear. As noted, maize established new yearly highs in the subsequent period; wheat and soybeans did not. All three markets were characterized by frequent price rises and falls, with a sharp drop in September.

Tables 1–3 summarize the positions of traditional risk managers, swap dealers and money managers in the CBOT's maize, wheat and soybean futures and options markets before and after the 2011 price peaks, presenting data on each group's total long and net long positions in the markets. The basic open interest data are drawn from the Commitments of Traders reports released by the United States Commodity Futures Trading Commission (CFTC).

To provide a complete picture of market participation associated with the price peaks, the tables present four data points from the June article describing market positioning associated with the price trends leading to the peaks. In addition, the tables also present four data points after the initial peaks were reached, two observations of subsequent price highs and two observations of price lows, including the recent low in early October, which describe how the positioning changed in concert with the subsequent price volatility.

RESULTS OF THE ANALYSIS

Examination of the open interest data reveals certain similarities and differences among the three groups of market participants.

Producers, merchants, processors and product users

The traditional risk managers were net short (i.e. had negative net long positions) at every price point examined, with their largest net short positions (i.e. the largest negative net long positions) around the time of the price peaks. It appears many were locking in high prices for the sale of their products. They had the smallest net short positions (i.e. the smallest negative

net long positions) in early October when prices were at their recent lows. In all three markets, the long positions of these participants were at quite high levels in October, in terms of absolute number of positions and percent of total open interest. They had bought heavily as the prices dropped in September. This was particularly noticeable in the soybean market and may reflect a decision of many commercial buyers in this group to lock in prices at the relatively low levels in case prices were to rebound.

Swap dealers

These participants engage primarily in swap transactions relating to maize, wheat and soybeans in the over-the-counter market and use futures and options to manage associated risks. A certain segment of their clientele holds long positions for extended periods of time. In the analysis, swap dealers were long and net long at each price point examined. Their largest long positions were observed around the time of the initial 2011 price peaks. When maize established a new yearly price high several months later and soybean prices reached high levels, their long and net long positions in those markets were somewhat lower. Their positions did not change markedly during the period of price volatility, when no clear price trend was evident. However, when prices fell sharply to the recent lows in early October, the swap dealers reduced their net long positions. There is some evidence that this group reduced its long and net long positions in the latter part of the period examined, i.e. at the last four data points.

Money managers

Money managers conduct futures and options trading on behalf of clients. They are continually looking for profit opportunities in futures, options and other investments and consequently, may be expected to shift their market positions frequently. The tables show that money managers had the greatest long and net long positions around the price peaks. The positions of this group are the most volatile and appear to have the clearest relationship to price rises and falls. They have the largest long positions when prices go up; they reduce their long positions when prices go down. They seem to respond more readily to short-term price movements than the other groups. Although generally net long, in the wheat market, they are net short at three price points with the largest net short position at the recent price low in early October. The long positions of all three markets are relatively low in October. As with the swap dealers, their long and net long positions tend to be lower in the recent period of the study. During the clear upward price trend early in the study period, they maintained greater long positions than they held later when prices were more volatile and the trend less clear.

CONCLUDING COMMENT

In reviewing the price and market position data presented here, it is important to remember that this analysis does not consider cause and effect. Other, more rigorous studies have examined the impact that price movements may have on changes in investment in the markets, and vice versa.

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Commodity Futures Trading Commission (CFTC). "Disaggregated Commitments of Traders Reports (Futures and Options Combined)"; various releases. www.cftc.gov.

Rose, Frank S. 2011. "An Examination of the Maize, Wheat and Soybean Price Peaks in 2008 and 2011 and Investors' Participation in Futures Markets;" *Food Outlook;* Food and Agriculture Organization; June, 2011, Rome. www.fao.org.

Table 1: Maize Price Peak – 2011
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers and Money Managers
Chicago Board of Trade Maize Futures and Options
(Thousands of Contracts, Percent of Total Open Interest in Parentheses)

Date	Cash price	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
		Long	Net long	Long	Net long	Long	Net long
Price Peak Examined in the June Report							
	USD/tonne						
Start of Uptrend June 22, 2010	149.50	255 (16%)	-330	471 (29 %)	400	357 (22%)	69
Month Before Peak February 22, 2011	290.60	450 (19%)	-616	463 (20%)	283	635 (27%)	375
Initial 2011 Peak April 5, 2011	327.70	459 (19%)	-538	502 (20%)	272	629 (26%)	322
Month After Peak May 10, 2011	288.50	371 (17%)	-525	443 (21%)	253	378 (18%)	302
Subsequent Price Volatility							
New 2011 Peak June 7, 2011	334.40	339 (16%)	-534	448 (21%)	238	603 (28%)	319
Low June 28, 2011	274.60	319 (18%)	-450	412 (23%)	242	439 (25%)	226
High August 30, 2011	329.70	291 (15%)	-486	408 (21%)	234	555 (28%)	327
Most Recent Low October 4, 2011	256.80	405 (21%)	-292	390 (20%)	194	404 (21%)	171

Sources of Open Interest Data: Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports.

Table 2: Wheat Price Peak – 2011
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers and Money Managers
Chicago Board of Trade Wheat Futures and Options
(Thousands of Contracts, Percent of Total Open Interest in Parentheses)

Date	Cash price	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
		Long	Net long	Long	Net long	Long	Net long
Price Peak Examined in the June Report							
	USD/tonne						
Start of Uptrend September 29, 2009	154.90	40 (9%)	-77	165 (38%)	117	98 (23%)	-12
Month Before Peak January 4, 2011	302.90	70 (11%)	-197	237 (39%)	186	141 (23%)	39
2011 Peak February 8, 2011	358.60	86 (12%)	-208	247 (34%)	176	169 (23%)	52
Month After Peak March 8, 2011	272.10	74 (12%)	-180	242 (39%)	173	113 (18%)	21
Subsequent Price Volatility							
High May 24, 2011	327.80	66 (11%)	-162	221 (38%)	155	123 (21%)	29
Low June 28, 2011	243.30	53 (10%)	-139	217 (41%)	175	110 (21%)	-7
High August 23, 2011	292.60	51 (9%)	-139	227 (41%)	178	124 (23%)	4
Most Recent Low October 4, 2011	250.20	70 (13%)	-94	212 (40%)	159	107 (20%)	-32

Sources of Open Interest Data: Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports.

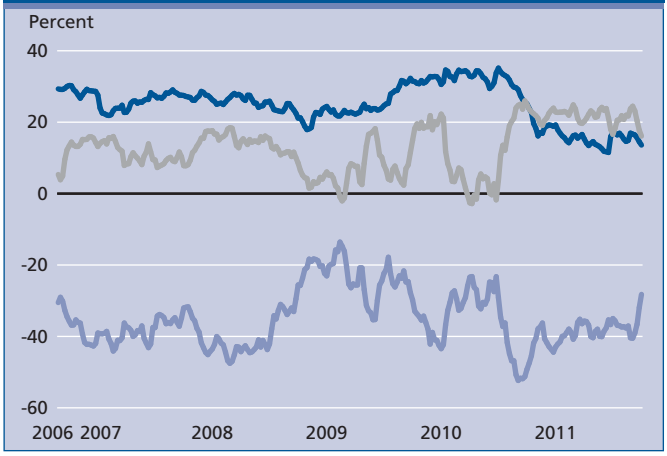
Table 3: Soybean Price Peak – 2011
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers and Money Managers
Chicago Board of Trade Soybean Futures and Options
(Thousands of Contracts, Percent of Total Open Interest in Parentheses)

Date	Cash price	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
		Long	Net long	Long	Net long	Long	Net long
Price Peak Examined in the June Report							
	USD/tonne						
Start of Uptrend January 26, 2010	351.63	105 (18%)	-117	167 (29%)	138	143 (25%)	32
Month Before Peak January 4, 2011	526.71	131 (14%)	-302	212 (23%)	155	249 (27%)	154
2011 Peak February 1, 2011	557.03	132 (13%)	-302	210 (21%)	142	283 (29%)	169
Month After Peak March 1, 2011	527.08	141 (17%)	-225	196 (23%)	123	214 (25%)	115
Subsequent Price Volatility							
High May 31, 2011	548.21	158 (19%)	-193	177 (22%)	122	226 (28%)	105
Low June 28, 2011	507.88	163 (23%)	-147	179 (25%)	129	167 (23%)	61
High August 30, 2011	554.27	98 (12%)	-293	169 (21%)	116	258 (32%)	179
Most Recent Low October 4, 2011	441.84	224 (25%)	-110	172 (19%)	92	169 (19%)	50

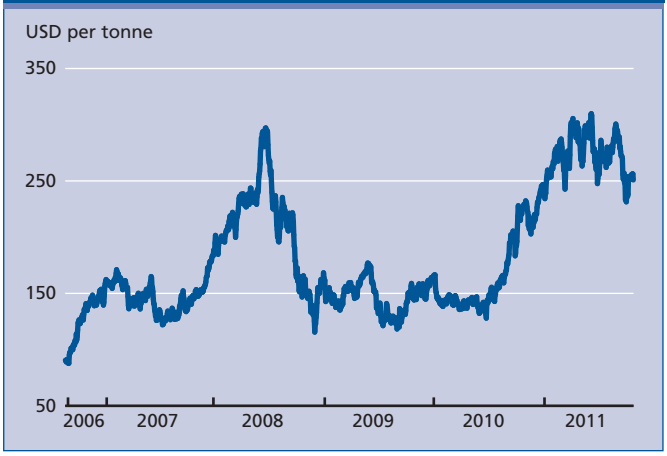
Sources of Open Interest Data: Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports.

Market indicators

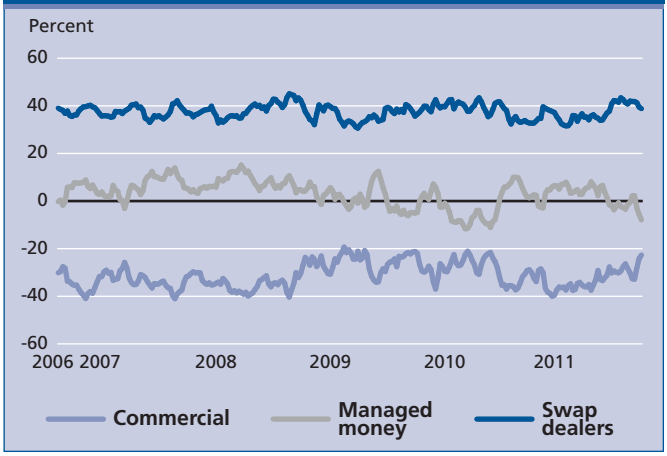
CME maize net - length as % of open interest (September 2006 - October 2011)



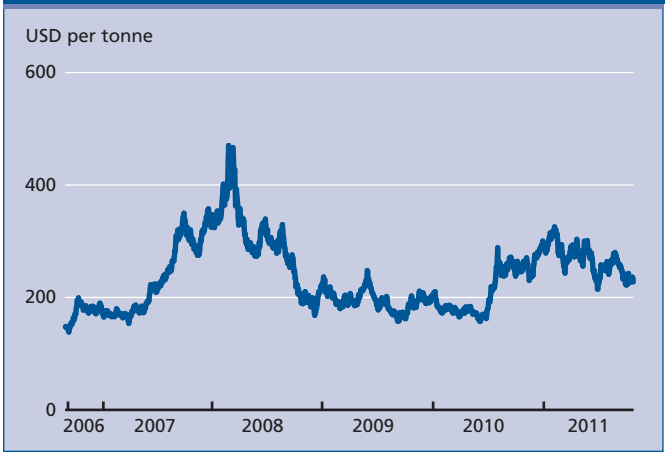
CME maize futures (September 2006 - October 2011)



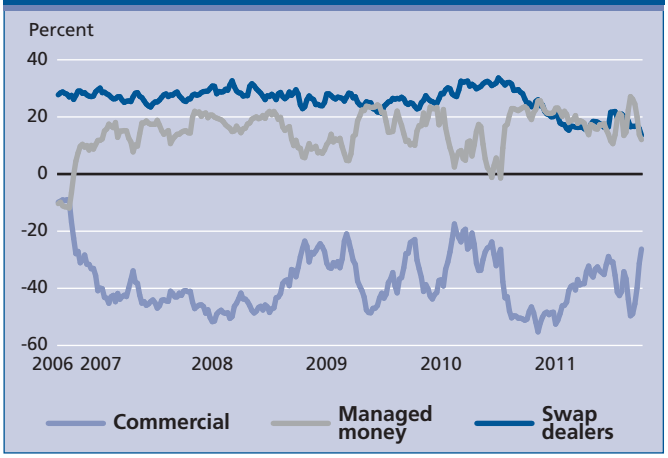
CME wheat net - length as % of open interest (September 2006 - October 2011)



CME wheat futures (Soft red wheat) (September 2006 - October 2011)



CME soybeans net - length as % of open interest (September 2006 - October 2011)

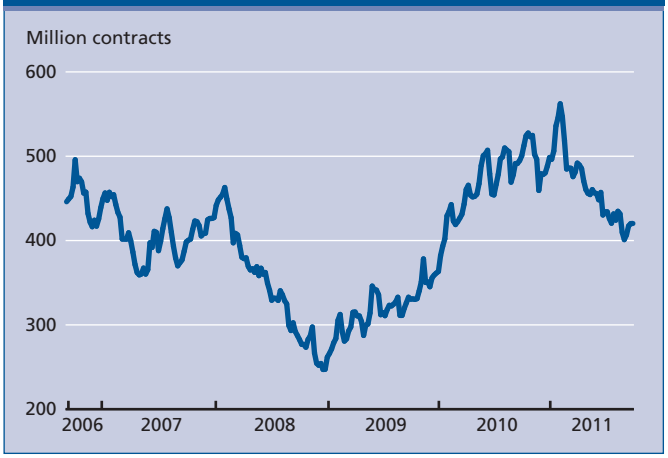


CME soybeans futures (September 2006 - October 2011)

Market indicators

CME maize open interest (September 2006 - October 2011)

CME wheat open interest (September 2006 - October 2011)



CME soybeans open interest (September 2006 - October 2011)

RECENT PATTERNS OF INVESTMENT IN CRUDE OIL AND METALS DERIVATIVES MARKETS, WITH COMPARISONS TO GRAINS AND OILSEEDS DERIVATIVES

(Frank S. Rose, College of Business, Lewis University, Romeoville, Illinois, United States)

INTRODUCTION

In recent years, there has been considerable attention paid to the activities of investors in the derivatives markets and their possible impact on prices. The Food Outlook has presented several articles examining investor participation in the maize, wheat and soybean futures and options markets in Chicago. The current issue contains an update on this topic (Rose, November 2011).

This article looks at the investor involvement in several of the exchange-traded derivatives markets for crude oil, precious metals and base metals. Looking at the past five years, the markets in crude oil, gold, silver, copper and platinum saw sharp price increases in 2008 followed by rapid price drops and subsequent upward price trends leading to new peaks in 2011. Most recently, prices of all of these products have fallen from their 2011 peaks.

Price analysts made extensive studies of the impact of the global slowdown on these markets. This analysis should be considered against the backdrop of the weak macroeconomic environment. The widely-followed S&P GSCI index, which contains most of the products included in this analysis, fell precipitously in 2008 and 2009 and, after two years of recovery, has fallen significantly again from its April 2011 peak. Many commentators largely attribute the declines to sluggish demand for commodities. The principal question addressed in this article is how investors in the selected commodity futures and options markets have behaved during the price rises and falls of the 2007– 2011 period.

In the next section, the analytical approach and data are explained. Then, patterns of investor and traditional hedger participation in the crude oil and metals markets of the past five years are described, with particular reference to the 2008 and 2011 price peaks. Finally, comparisons are drawn between these markets and the grain and oilseeds markets with respect to the price patterns observed in the markets and the market positioning of various user groups.

ANALYTICAL APPROACH

The analysis examines the involvement of traditional commercial hedgers, swap dealers and money managers in the crude oil, gold, silver, copper and platinum futures and options markets. Comparisons are made with the maize, wheat and soybean markets which are analysed in the associated article in this issue of Food Outlook. Traditional commercial hedgers include producers, merchants, processors and other commercial users of the underlying products who have used the markets for risk management purposes for many years. Swap dealers use the markets to manage risks associated with the provision of over-the-counter swaps related to the underlying commodities. Money managers trade on behalf of their investment clients.

Figures 1 and 2 present cash market prices for crude oil and metal products for the October 2006 - October 2011 period. Six price points were selected for each product:

1. 16 January 2007 – a time of low prices for all the products near the beginning of the upward 2007-2008 price trends.
2. 2008 price peak – date given for each individual product.
3. 16 December 2008 – prices of all products were near their lows after significant price declines.
4. 15 June 2010 – prices of all products were trending upward.
5. 2011 price peak – date given for each individual product.
6. 4 October 2011 – prices of all products experienced significant declines in September and this is the date of the latest available position data used in the analysis.

At each price point, data on the market positions of each participant group is analysed.

Market participation in the following futures and options markets is examined:

1. New York Mercantile Exchange (NYMEX) light sweet crude oil.
2. Intercontinental Exchange (ICE Futures – Europe) light sweet crude oil.
3. Commodity Exchange (COMEX) high grade copper.
4. COMEX gold.
5. COMEX silver.
6. NYMEX platinum.

The light sweet crude oil markets at both NYMEX and ICE were selected to permit interexchange comparisons of user

Market indicators

Figure 1. Brent Crude Oil cash price (Crude Oil dated Brent, fob UK, October 2006 - October 2011)

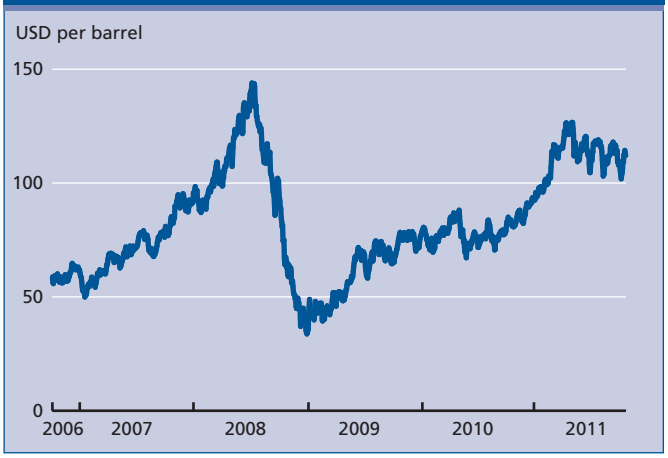


Figure 2. Gold cash price (Gold (UK), London afternoon fixing, October 2006 - October 2011)

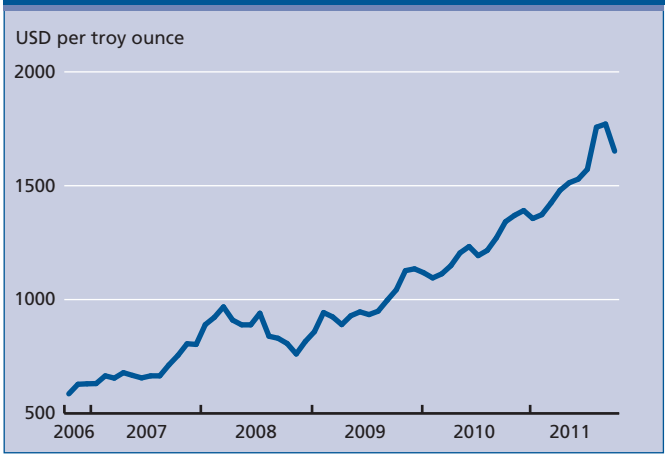


Figure 1. Light Sweet Crude Oil cash price (WTI, October 2006 - October 2011)

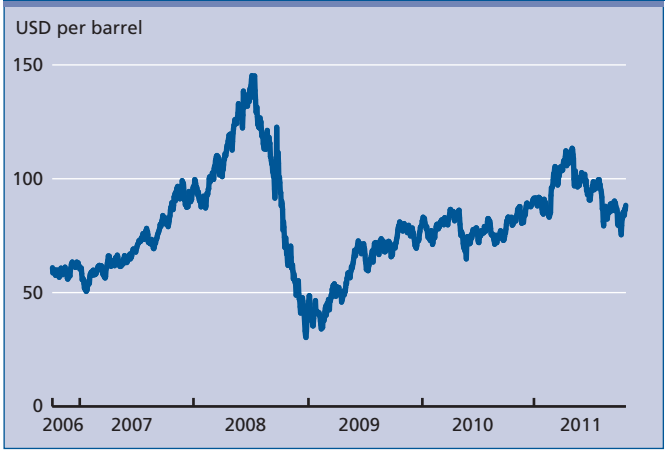


Figure 2. Silver cash price (Silver (Handy & Harman), New York, October 2006 - October 2011)

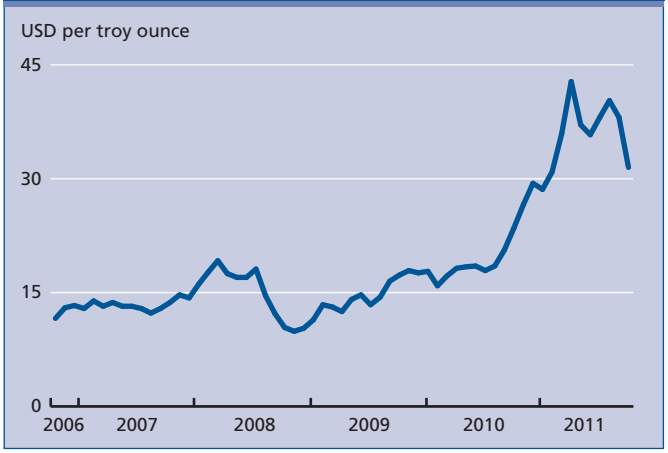
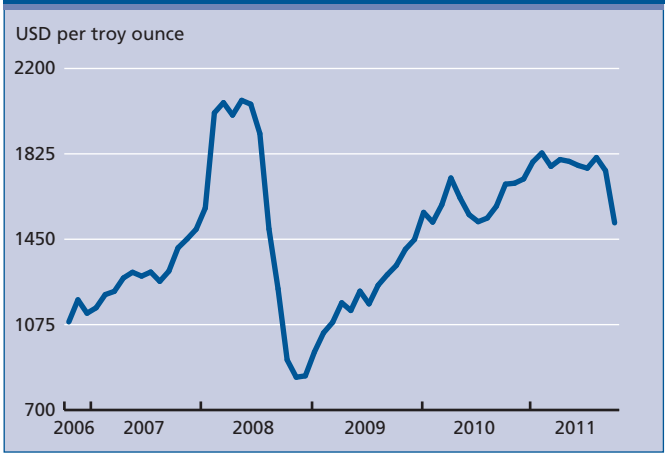


Figure 1. Copper cash price (Copper (LME), October 2006 - October 2011)

Figure 2. Platinum cash price (London fixings, October 2006 - October 2011)



participation. Although an actively traded contract at ICE, Brent crude oil is not included in the analysis as participation data are not available. However, Brent crude prices are closely followed, and they are presented in Figure 1 to illustrate their correlation with light sweet crude oil prices. Copper, gold, silver and platinum – one base metal and three precious metals, are the most active metals contracts traded in the CME Group's COMEX and NYMEX markets.

Data on open interest (i.e. open positions) of the traditional hedgers, swap dealers and money managers are drawn from the Commodity Futures Trading Commission's (CFTC's) Commitments of Traders reports. Tables 1–4 present open interest data from the CFTC reports. In addition, the tables present "net long" calculations, based on the data, which indicate the difference between open long (i.e. buy) and open short (i.e. sell) positions for each of the market participant groups.

PARTICIPATION IN THE SELECTED CRUDE OIL AND METALS FUTURES AND OPTIONS MARKETS

Crude Oil

Table 1 summarizes the analysis of participation in the crude oil markets. Open interest in the light sweet crude futures and options markets at NYMEX is four to five times greater than at ICE. There are similarities and differences in the market participation at the two exchanges. Unfortunately, data for the ICE market are not available for the first three price points, limiting comparisons. The traditional commercial hedgers are consistently net short in both markets, hedging to protect themselves against price declines. This group makes up a larger share of the long open interest at ICE. On 4 October, for example, they comprised 29 percent of the long open interest at ICE and 13 percent at NYMEX. At NYMEX, the commercials seemed to be increasing their net short positions as prices trended upward to the peak in April 2011.

Of the three participant groups studied, swap dealers have the largest share of the crude oil markets, accounting for 32-42 percent of the long open interest. At both exchanges, they moved from net long to net short between June 2010 and early October, and the size of their long positions declined over this time. At NYMEX, swap dealers were net long at the 2008 price peak but net short at the 2011 peak.

Money managers are net long at all price points at both exchanges, generally increasing their long positions when prices are high and decreasing their positions when prices drop. Their long and net long positions declined significantly between the price peak in April 2011 and the lows in early October. At NYMEX, their net long positions at the 2011 peak were four times greater than at the 2008 peak.

The Brent contract at ICE trades much more actively than the exchange's light sweet crude contract. January–September 2011 trading volume was 99.2 million contracts for Brent; 40.8 million contracts for light sweet. (Volume of NYMEX light sweet crude was 136.6 million). Year-on-year volume of ICE Brent was up 32 percent, compared with 6 percent and 2 percent increases in light sweet volume at NYMEX and ICE, respectively. As noted, the prices of the two types of crude are correlated but CFTC open interest data for the Brent contract are not available.

Copper

Open interest in copper futures and options is much smaller than in the two crude oil markets. Again, producers and other commercials are always net short. Their market share of long open interest fluctuates widely, from 5 to 21 percent over the six observations. As with crude oil, swap dealers have the largest share of long open interest, 47 percent in October 2011, for example. Again, the money managers increase their long positions when prices rise, and reduce them when prices fall. They were net short at the two lowest price points, and again in October 2011. They reduced their positions and market share sharply between the February 2011 price peak and the October lows.

Gold

Total gold open interest was relatively high at both the 2008 and 2011 price peaks. As with the other commodities, commercial users are always net short. Swap dealers have a lower share of long open interest in gold (23 percent in October, for example) than in the crude oil (33-36 percent) and copper (47 percent) markets. In contrast to the other two markets, they are always net short in gold. They reduced their net short positions significantly between the August 2011 price peak and the lows in October. Money managers are always net long and, again, the size of their positions fluctuates with price changes. Money managers reduced their long and net long positions between August and October.

Silver

Silver experienced two distinct price peaks in 2011, in April and August. April prices reached USD 47.88/oz and August prices reached USD 43.21/oz. As with gold, total open interest is the highest at the price peaks. Traditional hedgers are consistently short, money managers are consistently long, and swap dealer positions vary between long and short. It appears that swap dealers may change their positions from short to long as prices fall. That certainly happened between the April price peak and the price lows in early October. Again, the size of money manager's long and net long positions varies with price fluctuations. Their positions were larger during the

2008 peak than the 2011 peak, and they cut the size of their positions in half between April and October 2011.

Platinum

Platinum open interest is the smallest of the markets included in this analysis. CFTC position data are not available for the first three price points. Commercial hedgers and swap dealers are consistently net short in the three observations made in this analysis and, as with all the other commodities, money managers are consistently net long. Notably, money managers account for 42-49 percent of the long open interest in the platinum market, their largest market share in any of the commodities.

COMPARISONS WITH THE MAIZE, WHEAT AND SOYBEAN FUTURES AND OPTIONS MARKETS

The maize, wheat and soybean futures and options markets at the CBOT are relatively large as compared with the markets examined in this article. On 4 October 2011, open interest in the markets (in thousands of contracts) was:

NYMEX Light Sweet Crude Oil	2 795
CBOT Maize	1 912
CBOT Soybeans	889
COMEX Gold	804
CBOT Wheat	526
ICE Light Sweet Crude Oil	517
COMEX Silver	159
NYMEX Platinum	42

Many of the recurring themes of this analysis of the crude oil and metals derivatives markets also apply to the maize, wheat and soybean markets at the CBOT. All had price peaks in 2008 and 2011. The 2008 price peaks were followed by precipitous price declines in crude oil, copper, platinum, maize, wheat and soybeans. The 2008 price highs and subsequent declines in gold and silver were less severe. The decline from the 2011 peaks appears to be somewhat more gradual, although the price drops in September were quite sharp in maize, soybeans, gold, silver, copper and platinum.

With respect to the composition of the markets over the 2007–2011 period, we see that the producers, merchants, processors and users of the underlying products are consistently net short in all markets. The money managers are consistently net long and exhibit a pattern of increasing net long positions when prices are rising, and reducing net long positions when prices are falling. Changes in the positions of swap dealers show some of the same tendency, but it is not as consistent or pronounced. Swap dealers are generally net long but hold net short positions on occasion in the crude oil and metals markets. The money managers clearly reduced their long and net long positions in all the markets in the latter months of the study period.

Market shares of long open interest held by the participant groups vary by market. Traditional commercial hedgers hold about a 5–10 percent market share in silver and platinum, 10–25 percent in maize, wheat, soybeans, NYMEX crude oil and gold, and 25–30 percent in ICE crude oil. Swap dealers have approximately a 35–40 percent share in wheat, crude oil and copper, and about 25 percent in the other markets. Money managers' share in platinum is around 40 percent, but approximates 15–35 percent in the other markets.

SUMMARY AND CONCLUSIONS

Clearly, to understand the exchange-traded crude oil and metals derivatives markets, one must understand the activities of the investor segments using them. They account for significant portions of total market activity. It is likely that they will continue to invest in futures and options and/or use them to manage their price risks in other markets, taking advantage of their transactional efficiency, lack of credit risk, the ease of entry and exit, and close regulation. As noted above, the light sweet crude oil trading volumes have grown 6 percent at NYMEX and 2 percent at ICE this year, and Brent crude volume at the ICE has increased 32 percent (futures markets, number of contracts, January–September, year-on-year). Volumes in the other markets discussed here have grown as follows: copper: +19 percent, gold: +21 percent, silver: +108 percent, platinum: +40 percent, maize: +26 percent, wheat: +9 percent, and soybeans: +33 percent. Investor activity in these markets will be a major determinant of their continued growth.

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Table 1: Light Sweet Crude Oil
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers, and Money Managers
New York Mercantile Exchange and Intercontinental Exchange – Europe Futures and Options
(Thousands of Contracts, Percent of Open Interest in Parentheses)

Date	Cash price	Total Open Interest	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
			Long	Net long	Long	Net long	Long	Net long
NYMEX								
	USD/barrel							
January 16, 2007	50.49	2397	602 (25%)	-53	793 (33%)	-2	364 (15%)	42
2008 Price Peak July 8, 2008	145.66	2920	358 (12%)	-101	988 (34%)	19	647 (22%)	75
Dec. 16, 2008	33.87	2937	237 (8%)	-125	1212 (41%)	0	653 (22%)	77
June 15, 2010	77.18	2744	365 (13%)	-210	1085 (40%)	100	504 (18%)	98
2011 Price Peak April 26, 2011	113.93	2961	369 (12%)	-224	1039 (35%)	-146	658 (22%)	301
October 4, 2011	82.98	2795	373 (13%)	-125	1018 (36%)	-68	558 (20%)	146
ICE Futures - Europe*								
June 15, 2010	77.18	518	111 (21%)	-63	218 (42%)	21	67 (13%)	24
2011 Price Peak April 26, 2011	113.93	564	166 (29%)	-42	182 (32%)	-9	93 (16%)	44
October 4, 2011	82.98	517	149 (29%)	-31	170 (33%)	-1	58 (11%)	20

Sources of Data: Prices – www.barchart.com; Open Interest – Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports

Table 2: High Grade Copper
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers and Money Managers
Commodity Exchange Futures and Options
(Thousands of Contracts, Percent of Open Interest in Parentheses)

Date	Cash price	Total Open Interest	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
			Long	Net long	Long	Net long	Long	Net long
	USD/tonne							
January 16, 2007	5 511	71	15 (21%)	-2	34 (48%)	26	6 (9%)	-16
2008 Price Peak April 1, 2008	8 774	103	9 (9%)	-28	39 (38%)	21	28 (27%)	14
December 16, 2008	2 888	72	13 (19%)	05	32 (44%)	24	7 (10%)	-18
June 15, 2010	6 349	138	14 (10%)	-43	59 (43%)	44	33 (24%)	3
2011 Price Peak February 1, 2011	10 075	161	8 (5%)	-65	60 (37%)	37	58 (36%)	32
October 4, 2011	7 209	122	13 (11%)	-27	57 (47%)	36	24 (20%)	-5

Note: No open interest data is available for ICE Futures - Europe on January 16, 2007, July 7, 2008 and December 16, 2008.
Sources of Data: Prices – www.barchart.com; Open Interest – Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports

Table 3: Gold
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers, and Money Managers
Commodity Exchange Futures and Options
(Thousands of Contracts, Percent of Open Interest in Parentheses)

Date	Cash price	Total Open Interest	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
			Long	Net long	Long	Net long	Long	Net long
	USD/oz.							
January 16, 2007	635.90	421	63 (15%)	-66	62 (15%)	-31	142 (34%)	35
2008 Price Peak March 11, 2008	1 002.70	653	59 (9%)	-180	105 (16%)	-83	268 (41%)	182
December 16, 2008	838.30	418	61 (15%)	-106	66 (16%)	-29	121 (29%)	82
June 15, 2010	1 256.60	783	85 (11%)	-228	159 (20%)	-89	273 (35%)	218
2011 Price Peak August 30, 2011	1 882.40	955	152 (16%)	-202	174 (18%)	-73	251 (26%)	195
October 4, 2011	1 637.60	804	138 (17%)	-172	181 (23%)	-24	174 (22%)	127

Sources of Data: Prices – www.barchart.com; Open Interest – Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports

Table 4: Silver and Platinum
Open Interest of Producers/Merchants/Processors/Users, Swap Dealers, and Money Managers
Commodity Exchange Silver and New York Mercantile Exchange Platinum Futures and Options
(Thousands of Contracts, Percent of Open Interest in Parentheses)

Date	Cash price	Total Open Interest	Producers/Merchants Processors/Users		Swap Dealers		Money Managers	
			Long	Net long	Long	Net long	Long	Net long
COMEX Silver								
	USD/oz.							
January 16, 2007	12.87	129	15 (11%)	-29	15 (12%)	-19	36 (28%)	22
2008 Price Peak March 11, 2008	20.67	218	24 (11%)	-63	29 (13%)	-8	75 (34%)	38
December 16, 2008	10.89	113	12 (11%)	-37	22 (19%)	7	28 (25%)	12
June 15, 2010	19.18	165	9 (6%)	-56	32 (20%)	-2	53 (32%)	32
2011 Price Peak April 26, 2011	47.88	209	13 (6%)	-47	36 (17%)	-3	51 (24%)	26
October 4, 2011	31.12	159	15 (10%)	-31	40 (25%)	6	25 (15%)	11
NYMEX PLatinum *								
June 15, 2010	1 590	31	1 (3%)	-13	7 (23%)	-6	15 (49%)	14
2011 Price Peak August 30, 2011	1 878	46	1 (2%)	-21	10 (22%)	-12	23 (49%)	21
October 4, 2011	1 491	42	3 (7%)	-14	7 (17%)	-9	18 (42%)	14

*Note: No open interest data are available for NYMEX Platinum on January 16, 2007, July 7, 2008 and December 16, 2008.

Sources of Data: Prices – www.barchart.com; Open Interest – Commodity Futures Trading Commission, Commitments of Traders Disaggregated Reports

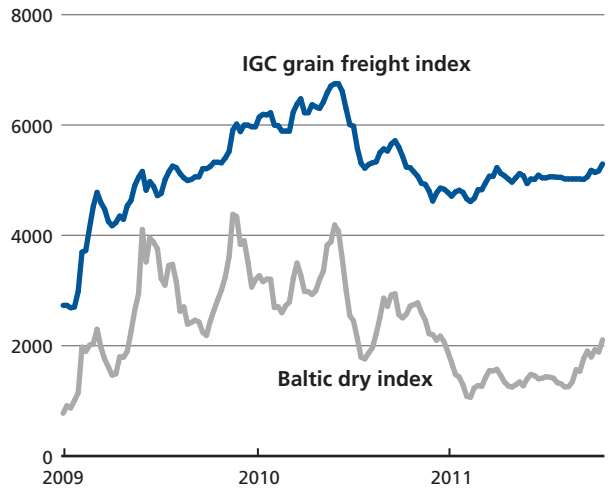
OCEAN FREIGHT RATES

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

OCEAN FREIGHT MARKET (June - mid-October 2011)

Dry bulk ocean freight rates have strengthened in recent months. After falling in August, mostly because of tonnage oversupply, rates climbed steadily in September/October, underpinned by improved demand for commodities, including grains and soybeans, higher bunker fuel prices and increasing maintenance costs. The rise was especially pronounced in the minerals-carrying Capesize market, where values reached an eleven-month high. The Russian Federation's resumption of grain exports saw Black Sea rates rebounding from previous low levels. Piracy pushed insurance premiums higher on routes along Africa's east coast, the Arabian Sea and the Indian Ocean. Overall, the Baltic Exchange Dry increased by 42 percent, reflecting the surge in Capesize rates, while the IGC Grain Freight Index (GFI)[1], which monitors the grain-carrying medium and smaller-sized sectors, increased by only 5 percent.

Ocean freight indices
January 2009 - October 2011 (May 2005=6000)



Atlantic **Panamax** rates retreated during July and August, notably on routes from South America, as ballasters from the Pacific continued to head into the area in search of cargoes. The situation reversed in September, when rates firmed on increasing grain shipping volumes from the US Gulf, South America and the Black Sea area, together with a tightening of tonnage supply, notably in Europe and the US Gulf. Rates in the Pacific were supported by mineral shipments from Australia and Indonesia.

Similar to the **Panamax** market, Handysize/Supramax rates at first weakened due to tonnage overcapacity and a seasonal downturn in demand. The monsoon in India reduced iron ore chartering activity, with rates from the country's east coast to China falling. The market started to recover from the end of August, bolstered by an increase in demand for grains and soybeans on routes from South America, the US Gulf and the Black Sea, the latter seeing a huge upturn in exports, including shipments to Far East Asia through the Suez Canal. Vessels in Europe remained in short supply, with owners increasing rates.

The **Capesize** market, having remained depressed during June and July due to a persistent oversupply of tonnage, subsequently registered a sharp upturn. This was attributable to a sizeable increase in China's iron ore and coal imports from Australia, Brazil and India, replenishing the country's dwindling supplies. The rise was reflected in the Baltic Exchange Capesize index (BCI), which advanced by as much as 85 percent between June and October.

[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.

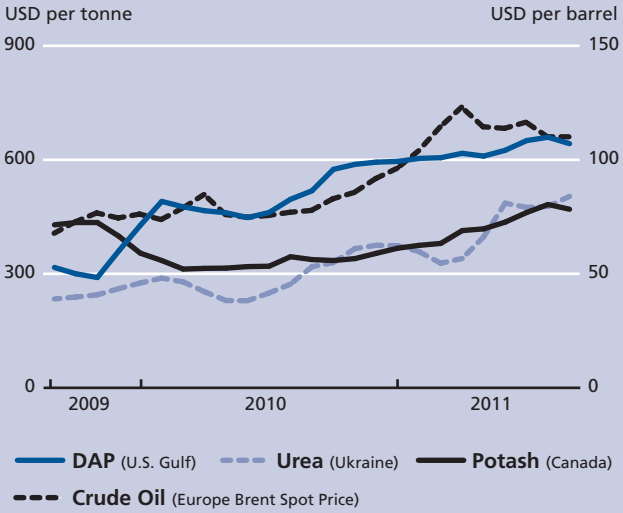
Market indicators

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**
Origin	Brazil	US (Gulf)	US (Gulf)	US (Gulf)
Destination	EU (ARAH)	EU (ARAH)	Japan	South Korea
October 2010	41	28	59	61
November 2010	37	26	55	56
December 2010	37	27	55	56
January 2011	41	27	54	55
February 2011	40	26	52	53
March 2011	41	28	56	57
April 2011	44	26	57	58
May 2011	44	26	58	59
June 2011	42	28	55	56
July 2011	42	28	54	55
August 2011	43	28	53	54
September 2011	43	27	54	55
October 2011	44	28	55	56

FOOD IMPORT BILLS

Monthly fertilizers and crude oil prices: September 2009 to September 2011

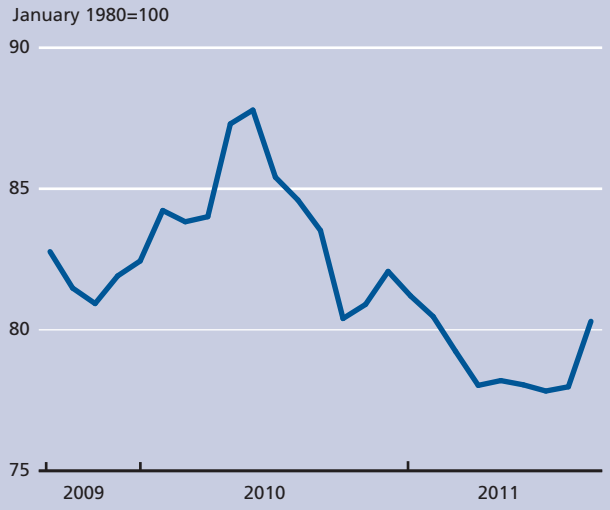
International prices of fertilizers have made further inroads since April, especially urea, reflecting a combination of rising production costs, strong import demand by countries such as India and Brazil and stretched export availabilities. Year-on-year, over January-September, fertilizers were between 24 percent (DAP) and 58 percent (urea) more expensive in 2011 than in 2010. International crude oil quotations were up 44 percent over the same period, but unlike fertilizers, they weakened somewhat in August and September on deteriorating world economic prospects. Persistent high crop prices and abundant Asian monsoon rains are likely to translate into large plantings over the NH winter season and robust demand for fertilizers both domestically and for trade. This may sustain world fertilizer quotations until the end of the year, although, in the case of urea, the opening of new production plants in North Africa and Near East could dampen the pressure.



Sources: IMF, World Bank

Price-adjusted major currencies US Dollar Index: September 2009 to September 2011

Over the period June 2010 to August 2011 the US Dollar fell against major currencies, losing around 11 percent of its value in real terms, providing significant support to commodity prices in world markets. However, since Septemben the dollar has begun to rally, reversing the falls in 2011.



[1] Price-adjusted major currencies US Dollar index
Source: US Federal Reserve

Global food import costs surge in 2011

The world food import bill is set to reach USD 1.29 trillion in the current year, confirming the expectation in the last report. At some USD 250 billion more than the previous year, bills in 2011 would represent a record in both level and increase.

The global bill will be marked by year-on-year double-digit percentage increases for all food categories, which are all highly likely to reach record levels in 2011. Rising expenditures on grain-based products and vegetable oils have fuelled much of the increase at the world level. The combined purchase of food commodities falling within these two categories, are now foreseen to account for 36 percent of the entire cost of importing food, contributing to well over a third of year-on increase in the global bill.

Rapidly rising import costs in 2011 are not only confined to grains and vegetable oils. For instance, world bills for sugar and beverages are anticipated to increase by as much as 23 percent while livestock products (meat and dairy) could rise, on average, by 19 percent. With the inclusion of fish, Imports of animal-based proteins are valued at USD 365 billion, firmly establishing this product group as the most expensive in the globally traded food basket.

Rising world prices, in the context of a falling US Dollar (the standard denomination of international quotations) throughout much of the year are, in most instances, the principal factors behind higher bills in 2011. In contrast to last year, growth in volumes traded at the global level has been virtually insignificant, and the world market has even contracted in the case of sugar. The combination of higher domestic production outcomes and the downgrading of

Market indicators

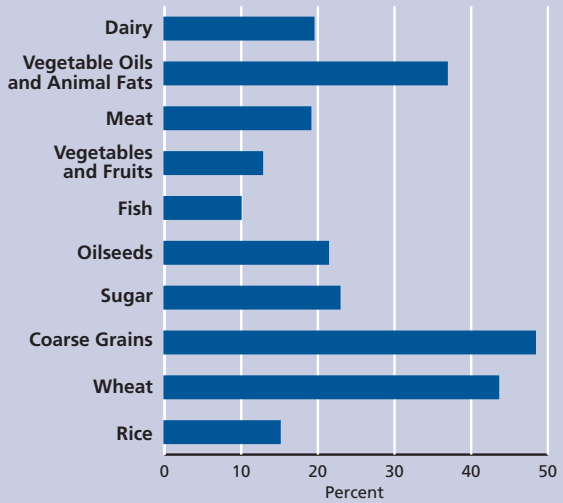
Forecast import bills of total food and major foodstuffs *(USD billion)*

	World		Developed		Developing		LDC		LIFDC		Sub-Saharan Africa	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
TOTAL FOOD	**1 041.5**	**1,292.2**	**663.7**	**813.1**	**377.7**	**479.1**	**27.3**	**35.9**	**163.3**	**206.9**	**30.7**	**39.6**
Vegetable and Fruits	186.9	210.6	145.1	163.5	41.8	47.1	2.5	2.9	16.5	18.6	2.2	2.5
Cereals	141.6	200.6	63.1	88.8	78.5	111.8	9.3	13.3	27.2	38.6	11.1	16.9
Meat	118.3	133.3	89.2	96.4	29.1	36.9	1.7	1.9	6.9	8.4	1.9	2.0
Fish	108.5	119.2	81.4	92.5	27.0	26.7	0.6	0.6	7.9	7.9	3.1	3.0
Dairy	73.4	87.6	49.1	58.3	24.3	29.4	1.8	1.9	10.8	13.2	2.3	1.8
Vegetable, Oils and Animal Fats	81.5	111.5	38.0	51.5	43.5	60.0	4.4	6.2	28.5	38.5	3.2	4.5
Oilseeds	61.7	74.9	21.0	25.5	40.7	49.4	0.4	0.3	30.5	39.2	0.3	0.4
Sugar	50.3	61.8	26.6	34.5	23.7	27.3	3.6	4.8	13.1	13.9	3.0	3.7

economic growth in several important global destinations is by and large behind fewer transactions in 2011. An additional factor containing the price-led higher bills has been low and stable international freight costs during the first eight months of 2011. However, in recent weeks freight charges have sharply increased, putting upward pressure on import costs.

Forecast changes in global food import bills by type: 2011 over 2010 (%)

Global import bills are se to reach record levels in 2011, marked by year-on double-digit percentage increases for all food categories. Rising expenditures on grain-based products and vegetable oils have fuelled much of the increase at the world level. With little expansion in the volume of transactions, bills have mostly been price-driven.



As for the most economically vulnerable groups, the increase in the cost of purchasing food on the international market place in 2011 has outpaced the global average. For instance, Low-Income Food-Deficit Countries (LIFDCs) expenditure could register a 27 percent jump, but of all economic groups, it is the bill of the Least Developed Countries (LDCs) that is expected to climb the most, at 32 percent, some 5 percent more than the average global rise and by far exceeding the record increase of the 2007-2008 high-price episode. Putting these numbers in greater perspective, the cost of imported foodstuffs for vulnerable countries could account for roughly 17 percent of all their expenditures on imports, compared with a world average of around 7 percent.

For many developing countries, the composition of their imported food basket as reflected by high-valued products points to an improved economic capacity to import. But for others, escalated bills do not necessarily imply greater food availability, as increased procurement of basic foodstuffs from the international market place will only compensate for a shortfall in domestic supply, as is the case in numerous LDCs and LIFDCs.

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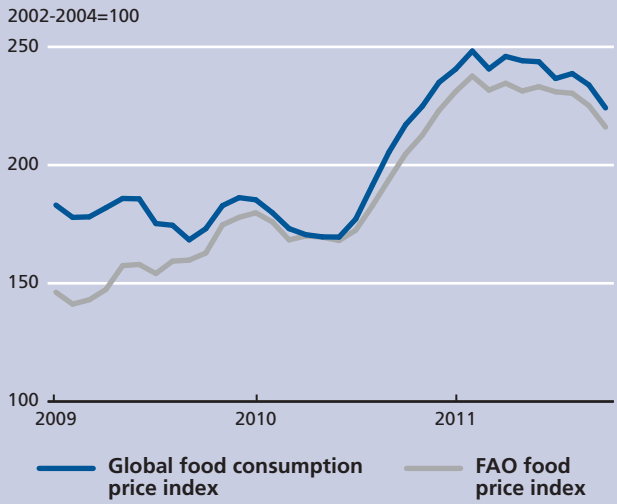
THE FAO PRICE INDICES

FAO Global Food Consumption Price Index

The **FAO Global Food Consumption Price Index** tracks changes in the cost of the global food basket as depicted by the latest FAO world food balance sheet (see http://faostat.fao.org/). After reaching a record of 248 points in February 2011, the index has been on a downward path, falling to a 12 month low of 216 points in Ocotber. In real terms, the cost of the global food basket has fallen by around 15 percent from the beginning of the year. Declining prices of wheat, sugar, vegetable oils and dairy products, which carry a higher weight in food consumption, are responsible for the overall reduction in the index.

The FAO global food consumption price index and FAO food price index: January 2009 to October 2011



FAO Food Price Index *

The **FAO Food Price Index (FFPI)** averaged 216 points in October 2011, down 4 percent, or as much as 9 points, from September and 22 points, or 9 percent, below its peak of 238 points reached in February 2011. The Index has been falling steadily since June and, in October, dropped to an 11-month low, but still some 5 percent above the corresponding period last year. The decline reflects sharp decreases in international prices of all the commodities included in the Index.

The **FAO Cereal Price Index** averaged 232 points in October, down 5 percent, or 13 points, from September, 15 percent below its peak in April 2008, though 5 percent, or 12 points, higher than in October 2010. The historical values of the FAO Cereal Price Index have been slightly revised following the reintroduction of the India 25 percent broken rice quotations in the computation of the FAO Rice Price Index. The continuing decline in the monthly value of the FAO Cereal Price Index reflects this year's prospect for a strong production recovery and slow economic growth in many developed countries weighing on overall demand, particularly from the feed and biofuels sectors.

The **FAO Oils/Fats Price Index** averaged 223 points in October, down 15 points, or 6 percent, from September, accelerating the gradual price decrease that started last March. The sizeable drop in the index reflected ample soybean crops in South America, strong palm oil output in Southeast Asia and the confirmation of record sunflower seed crops in the Black Sea region, which coincided with a slowdown in global import demand and downward pressure spilling over from other markets, in particular the international grain markets.

The **FAO Meat Price Index** averaged 177 points in October, marginally down from September but still 12 percent, or 19 points, above the corresponding period a year ago and only 3 points down from its 20-year high recorded in April 2011. Over the first ten months, meat prices averaged much higher in 2011 than last year, with year-on-year gains the strongest for ovine meat, up 36 percent, followed by beef and poultry, up 18 percent and 16 percent, respectively .

The **FAO Dairy Price Index** averaged 204 points in October, down 5 percent from September and stood at around the

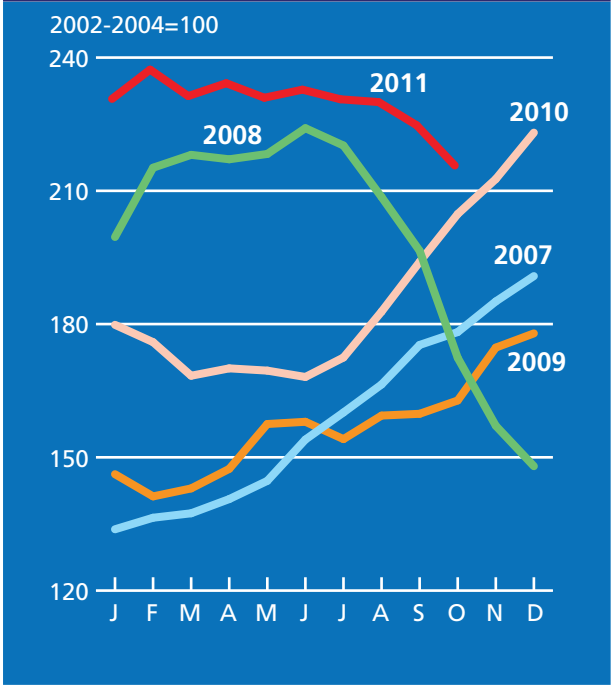
* The FAO food price indices are updated on monthly basis and are available on http://www.fao.org/worldfoodsituation/

Market indicators

same level as in October 2010. The decline of prices in recent months reflects improvements in world export availability and a fall in the value of the Euro in relation to the US Dollar, which promoted competition among exporters, as import demand remains firm.

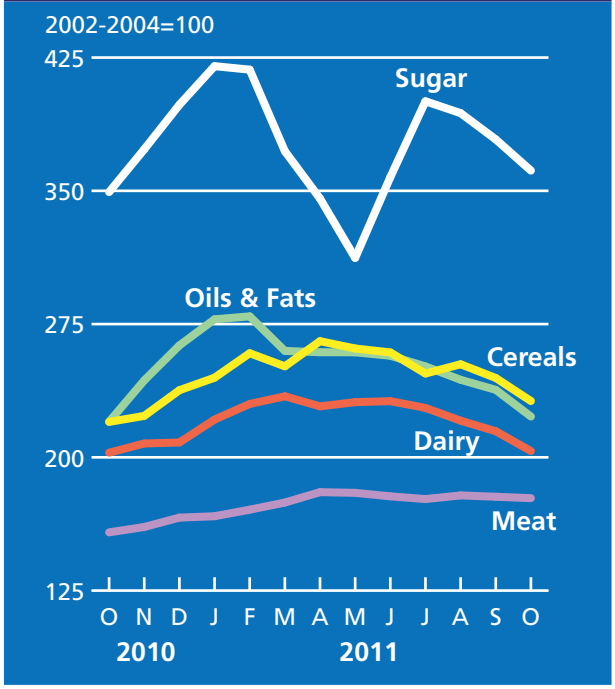
The **FAO Sugar Price Index** averaged 361 points in October, down 5 percent from September and 10 percent from the peak it reached in July 2011. Sugar prices have declined following better than earlier anticipated output in Brazil, the world leading sugar producer, but also in Europe, India, and Australia, combined with expectations of a slowing demand from the manufacturing and food preparation sectors.

FAO Food Price Index



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

Food Commodity Price Indices



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	96	95	85	68	116
2001		93	96	107	86	68	123
2002		90	90	82	95	87	98
2003		98	97	95	98	101	101
2004		112	114	123	107	112	102
2005		117	120	135	103	104	140
2006		127	119	128	121	112	210
2007		159	125	212	167	169	143
2008		200	153	220	238	225	182
2009		157	133	142	174	150	257
2010		185	152	200	183	193	302
2010	October	205	158	203	220	220	349
	November	213	161	208	223	243	373
	December	223	166	208	238	263	398
2011	January	231	167	221	245	278	420
	February	238	171	230	259	279	418
	March	232	175	234	251	260	372
	April	235	180	229	265	259	346
	May	231	180	231	261	259	312
	June	233	178	232	259	257	358
	July	231	177	228	247	251	400
	August	230	179	221	252	244	394
	September	225	178	215	245	238	379
	October	216	177	204	232	223	361

[1] **Food Price Index**: Consists of the average of five 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**: Computed from average prices of four types of meat, weighted by world average export trade shares for 2002-2004. Quotations include two poultry products, three bovine meat products, three pig meat products, and one ovine meat product. Where more than one quotation exists for a given meat type, they are weighted by assumed fixed trade shares. Prices for the two most recent months may be estimates and subject to revision.

[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.

Trade and Markets Division

Information, Analyses and Forecasts

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.

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