December 2009

Food Outlook

Global Market Analysis

FOCUS

Recent developments in world agricultural markets for basic food commodities have raised concern about a possible return to another round of high prices. In general, however, the difficulties facing markets today are different from those experienced during the 2007/08 food price surge. The FAO Food Price Index, a measure of the monthly change in international prices of a food basket composed of cereals, oilseeds, dairy, meat and sugar, has risen uninterruptedly since August 2009, a trend shared by nearly all its components. In November the index averaged 168 points, the highest since September 2008, although still 21 percent below its peak in June 2008. Prior to the price spike of 2007/08, the index never exceeded 120 points and, for most of the time, was below 100 points.

The unexpected rise in international prices of commodities, such as that witnessed in 2007/08, elicited considerable attention and debate about the nature and relevance of the factors underlying the price surge. Determining such factors and their relative weights, which is critical for understanding how markets will evolve, not only in the coming months (the time horizon of the Food Outlook publication) but also in the coming years, remains a challenge. At the onset of the price surge in 2007, FAO identified a number of possible causes contributing to the price rise: low levels of world cereal stocks; crop failures in major exporting countries; rapidly growing demand for agricultural commodities for biofuels; and rising oil prices. As the price strengthening accelerated, several other factors emerged to reinforce the upheaval; most importantly, government export restrictions, a weakening US Dollar and a growing appetite by speculators and index funds for wider commodity portfolio investment on the back of enormous global excess liquidity. What made the 2007/08 price spike exceptional was the concurrence of so many factors culminating in an unprecedented price rally and the fuelling of volatility.

The agricultural market situation today is different from that of 2007/08. World cereal stocks are at far more comfortable levels than they were two years ago, with the stock-to-use ratio at almost 23 percent, 4 percentage points more than at the time. Evidently, the balance of world supply and demand is not even across all commodities, with some markets facing tighter conditions than others. But, in general, supplies held by exporters are far more adequate to respond to rising demand than they were during the price surge period. For example, the wheat stocks-to-use ratio in major exporting countries has risen from 12 percent in 2007/08 to 20 percent this season. On the demand side, biofuels remain a leading driver, but the year-on-year growth has slowed down compared with the past few years. In the United States, the largest user of grains for biofuel production, the use of maize for ethanol has grown by 14 percent this season, down from 40 percent in the run-up of the high price period.

On the other hand, macro-economic factors, exchange rates, volatile oil prices and, once again, rising liquidity stemming from exceptionally low interest rates continue to generate uncertainty, which food markets have to live with. There is a strong argument that the importance of these factors, in terms of their impacts on agricultural commodity prices, has increased significantly in recent times. Although supply and demand fundamentals will continue to shape commodity markets, the now entrenched susceptibility of the global food system to external non-food economy events requires continuous vigilance.

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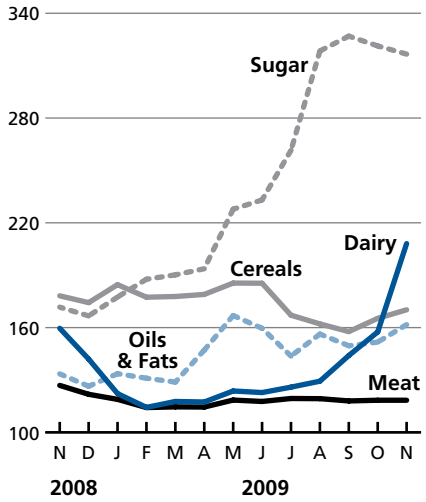
FAO food price indices (2002-2004=100)



Cereals market summary

A combination of a good outlook for production and relatively high opening stocks should lessen concerns about the cereal supply situation in the 2009/10 marketing season. The overall improvement in the global supply and demand balance is underscored by the ratio of world cereal stocks to utilization, an important indicator for global food security, which is expected to remain unchanged from the previous season at an above-average level of 23 percent. Developments in international prices also confirm the return, albeit slow, of cereal markets towards a more balanced situation, as reflected in the FAO Cereal Price Index, which, in January-November 2009 has averaged 29 percent less than during the corresponding period last year and as much as 40 percent below its peak in April 2008. As for 2010, the preliminary outlook for production points to a decline in plantings, mostly on account of lower price expectations. In the European Union and the CIS, barley is foreseen to be most affected while winter wheat plantings in the United States may also be negatively influenced by the low price prospects.

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World cereal market at a glance [1]

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	**2 149.1**	**2 284.1**	**2 238.1**	**-2.0**
Trade [2]	**273.0**	**283.2**	**260.2**	**-8.1**
Total utilization	**2 156.6**	**2 189.6**	**2 228.2**	**1.8**
Food	1 012.4	1 031.4	1 044.7	1.3
Feed	769.2	760.9	768.9	1.0
Other uses	374.9	397.2	414.6	4.4
Ending stocks	**426.7**	**505.6**	**509.8**	**0.8**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	151.7	152.7	152.8	0.1
LIFDC (Kg/year) [3]	154.9	156.3	156.4	0.0
World stock-to-use ratio (%)	**19.5**	**22.7**	**22.8**	
Major exporters' stock-to-disappearance ratio (%)	**13.8**	**17.5**	**16.1**	

FAO cereal price index (2002-2004=100)	**2007**	**2008**	**2009**	**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	167	238	174*	-29

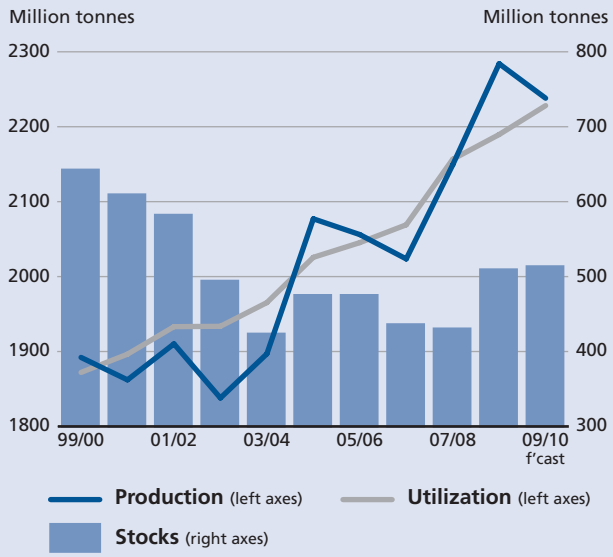
* January-November 2009

[1] Rice in milled equivalent

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

[3] Low-Income Food Defecit Countries

Cereal production, utilization and stocks



Wheat market summary

Wheat production in 2009 is forecast to fall slightly below last year's record while stocks are expected to increase for the second consecutive season, given an only modest expansion envisaged for world wheat utilization. With world trade in 2009/10 falling sharply below the previous season's record volume, mostly due to large harvests in importing countries in North Africa and Asia, international wheat prices fell during the first three months of the 2009/10 season, between July and September. However, prices started to increase in October, supported by strength in other major cereal markets and the weak United States Dollar. With the world inventory remaining at a comfortable level and continued support in several countries for higher wheat plantings next year, there should be less of an upside risk of higher prices in the coming months. However, given the increasing linkages with other markets, and the high degree of uncertainty that prevails in many of those markets, a period of volatile and even rising prices cannot be ruled out.

World wheat market at a glance

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	**625.5**	**681.4**	**678.6**	**-0.4**
Trade [1]	**112.1**	**139.1**	**117.0**	**-15.9**
Total utilization	**644.7**	**647.6**	**665.3**	**2.7**
Food	447.8	455.6	462.9	1.6
Feed	122.6	119.9	125.3	4.5
Other uses	74.3	72.1	77.0	6.9
Ending stocks	143.3	172.3	183.5	6.5
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	67.1	67.5	67.7	0.4
LIFDC (Kg/year)	57.2	57.8	58.3	0.8
World stock-to-use ratio (%)	**22.1**	**25.9**	**27.9**	
Major exporters' stock-to-disappearance ratio (%) [2]	**11.8**	**17.5**	**20.3**	

Wheat price index * (2002-2004=100)	**2007**	**2008**	**2009**	**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	179	235	154**	-36

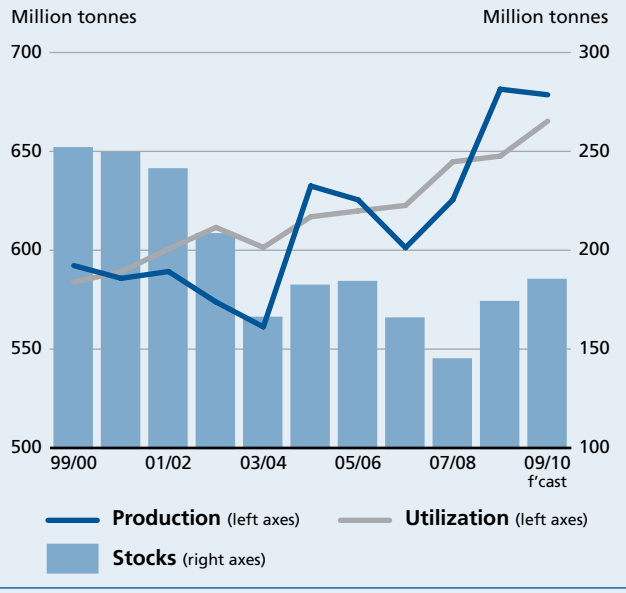
* Derived from International Grains Council (IGC) Wheat Index

** January-November 2009

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

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

Wheat production, utilization and stocks



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Coarse grains market summary

The forecast decline in world production, combined with an expected reduction in stocks and a recent further strengthening in international prices, all point to a tightening supply and demand balance for coarse grains. Although world trade is seen to decline slightly below the previous season's reduced level, export supplies are also lower than in the previous season, with sharp reductions especially in Argentina and the CIS exporting countries. The bulk of the contraction in world trade is expected in barley and to a lesser extent in sorghum, while trade in maize is forecast to increase. The potential for a more sustained increase in international prices in the coming months appears limited as overall demand prospects from feed and fuel sectors remain less brisk than last year, but developments in outside markets, energy and soybeans in particular, will continue to be influential.

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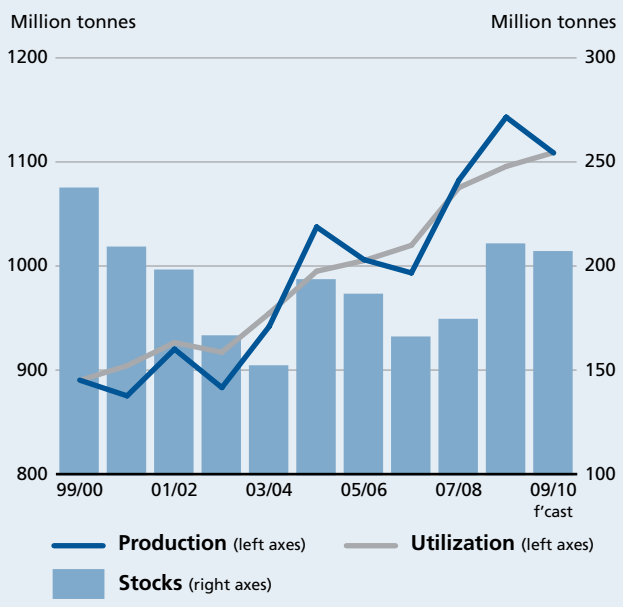
World coarse grains market at a glance

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	**1 082.4**	**1 143.1**	**1 108.7**	**-3.0**
Trade [1]	**130.8**	**113.7**	**112.0**	**-1.5**
Total utilization	**1 075.3**	**1 095.7**	**1 109.0**	**1.2**
Food	187.6	192.5	192.7	0.1
Feed	634.6	629.1	631.5	0.4
Other uses	253.1	274.2	284.8	3.9
Ending stocks	**172.6**	**208.9**	**205.2**	**-1.8**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	28.1	28.5	28.2	-1.1
LIFDC (Kg/year)	28.9	29.4	29.0	-1.6
World stock-to-use ratio (%)	**15.8**	**18.8**	**18.2**	
Major exporters' stock-to-disappearance ratio (%) [2]	**12.0**	**14.4**	**13.8**	

FAO coarse grains price index (2002-2004=100)	**2007**	**2008**	**2009**	**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	154	211	157*	-27

* January-November 2009
[1] Trade data refer to exports based on a common July/June marketing season
[2] Major exporters include Argentina, Australia, Canada, EU and the United States

Coarse grain production, utilization and stocks



Rice market summary

The most salient feature of the world rice sector in 2009 is the anticipated contraction in global rice output, the first since 2002, following an erratic pattern of the southwest Asian monsoon and other setbacks. Severe losses in the Philippines and other countries have brought back momentum to world import demand and to international prices, but have also raised concerns over export supplies in 2010. Although reserves will need to be drawn down somewhat in 2010 to meet the gap between global production and consumption, overall they are foreseen to remain adequate. However, stocks held by major exporters may fall substantially in 2010, both volume-wise and as a share of disappearance, which may underpin prices further in the next few months.

World rice market at a glance

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE (milled basis)				
Production	**441.2**	**459.6**	**450.8**	**-1.9**
Trade [1]	**30.1**	**30.4**	**31.2**	**2.7**
Total utilization	**436.6**	**446.3**	**453.9**	**1.7**
Food	377.0	383.3	389.1	1.5
Ending stocks	**110.8**	**124.4**	**121.1**	**-2.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	56.9	57.2	57.3	0.2
LIFDC (Kg/year)	69.4	69.6	69.7	0.1
World stock-to-use ratio (%)	**24.8**	**27.4**	**26.2**	**-4.4**
Major exporters' stock-to-disappearance ratio (%) [2]	**17.5**	**20.6**	**14.3**	**-30.6**

FAO rice price index (2002-2004=100)	2007	2008	2009	Change: Jan-Nov 2009 over Jan-Nov 2008 %
	161	295	253*	-15.1

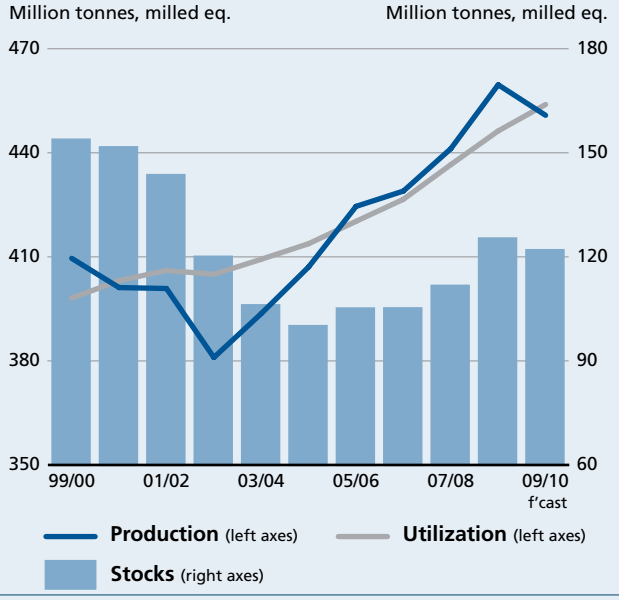
[1] Calendar year exports (second year shown)

[2] Major exporters include India, Pakistan, Thailand, the United States of America 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/es/esc/en/15/70/highlight_71.html

* January-November 2009

Rice production, utilization and closing stocks



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Cassava market summary

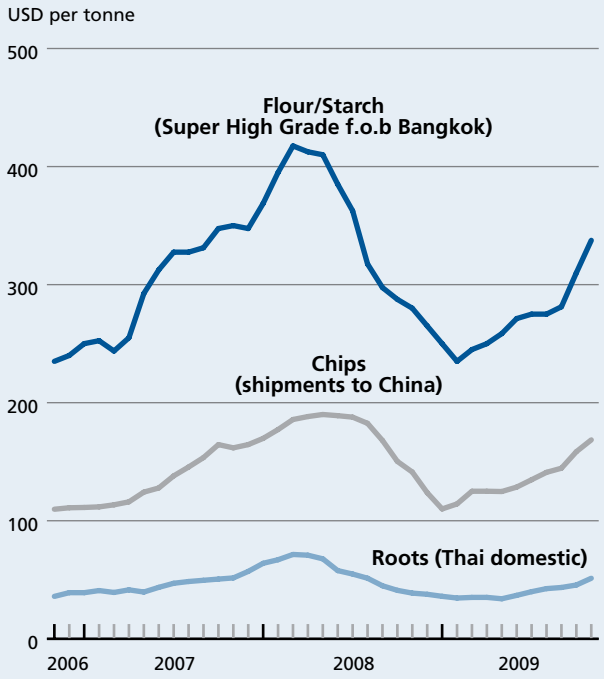
Global cassava production is set to rise to a new high in 2009, driven by initiatives to sustain food security, and to meet the needs of the ethanol sector where cassava has emerged as a key feedstock. World trade in cassava products is set to undergo a considerable expansion by the end of the year, but with the retreat from the import market by the European Union, trade will be confined mostly to Asia. Thailand, once again, is expected to be the leading source of trade supplies, but its dominance is set to be challenged by the arrival of Viet Nam on the international market. On the import side, China is likely to remain the major destination of trade in cassava products. Prices of internationally traded cassava products have staged a sharp rally in recent months, but annual averages still remain below 2007 levels. Domestic policies in the markets of the principal exporters and importers of cassava have paved the way for a surge in demand, and hence price quotations are expected to remain firm in 2010, though much will depend on the demand for cassava products for feed, alcohol, or ethanol production, which in turn will rest on the pattern and speed of the economic recovery.

World cassava market at a glance

	2007	2008 *estim.*	2009 *f'cast*	Change 2009 over 2008
	(million tonnes fresh root equiv)			%
WORLD BALANCE				
Production	**217.5**	**233.4**	**242.1**	**3.7**
Trade	**44.8**	**37.8**	**49.8**	**31.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption				
World (kg/year)	17.5	18.6	19.1	2.5
Developing (kg/year)	22.2	23.5	24.1	2.4
LDC (kg/year)	60.8	65.9	64.5	-2.1
Sub Saharan Africa (kg/year)	94.2	103.7	103.6	0.0
Trade - Share of prod (%)	20.6	16.2	20.6	27.0
FAO cassava prices	**2007**	**2008**	**2009***	**Change:** Jan-Nov 2009 over Jan-Nov 2008
		USD/tonne		%
Chips (shipments to China)	136.0	171.1	134.1	-21.7
Starch (f.o.b. Bangkok)	303.1	383.6	271.7	-29.2
Thai domestic root prices	45.7	57.2	39.5	-31.0

Source: Thai Tapioca Trade Association
* January-November 2009

International cassava prices



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Oilseeds market summary

Following tight markets in 2007/08 and 2008/09, during 2009/10, a gradual easing of the global supply and demand situation appears likely, in particular with regard to meals and possibly soybeans. In the market for **meals and cakes**, a weakening in prices is possible later into the season but only if, as expected, a large South American crop becomes available. By contrast, in the **oils and fats** market, a tighter supply and demand situation could strengthen prices as the season advances. However, in general, the markets for oilseeds and oilseed products are likely to remain vulnerable during 2009/10 as supplies are expected to be less ample relative to demand than in past years and prices may well remain volatile. Moreover, at this early stage of the season the market faces some major uncertainties, in particular possible weather-related problems in South America and Southeast Asia, but also changes in the global economy, developments in mineral oil prices and exchange rates and possible adjustments in biofuel and trade policies. World trade flows of both oils/fats and meals/cakes are expected to stall in 2009/10 as major importing countries hold relatively ample supplies, while, among exporters, the need to replenish stocks may limit export availabilities.

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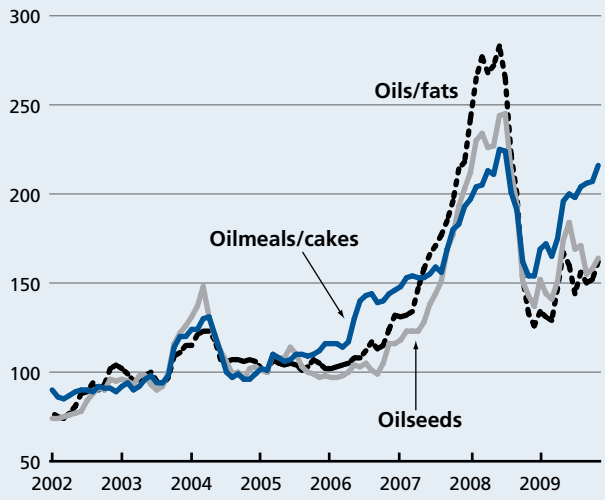
World oilseeds and products markets at a glance

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
TOTAL OILSEEDS				
Production	403.5	407.1	440.5	8.2
OILS AND FATS				
Production	155.6	159.7	168.0	5.2
Supply	179.8	182.8	190.0	3.9
Utilization	157.5	161.7	167.0	3.3
Trade	80.5	85.1	83.9	-1.4
Stock-to-utilization ratio (%)	*14.6*	*13.6*	*13.7*	
MEALS AND CAKES				
Production	101.5	99.7	111.9	12.2
Supply	123.1	116.9	126.4	8.1
Utilization	104.9	103.8	106.9	3.0
Trade	63.0	61.7	62.4	1.1
Stock-to-utilization ratio (%)	*16.9*	*14.0*	*16.9*	

FAO price indices (Jan-Dec) (2002-2004=100)	2007	2008	2009*	Change: Jan-Nov 2009 over Jan-Nov 2008 %
Oilseeds	149	205	160	-24.2
Oilmeals/cakes	163	195	192	-3.5
Oils/fats	169	225	148	-36.7

Note: Refer to Table 12 for further explanations regarding definitions and coverage
* January-November 2009

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



Sugar market summary

Since the publication of the last report in June, the International Sugar Agreement daily prices have continued to rise sharply, reaching a 28-year high on 31 August 2009. By mid-November, prices were still firm. World sugar production is expected to recover somewhat in 2009/10, largely due to favourable weather conditions and prices. Nevertheless, production is anticipated to remain short of consumption for the second consecutive year, with the deficit estimated in the order of 3 million tonnes. As a result, global reserves are foreseen to decline remaining, however, rather high, both in absolute terms and as a share of utilization. Global consumption in 2009/2010 is expected to grow below the ten-year trend. World trade may expand by 5 percent, sustained by strong import demand in India. Looking ahead, world sugar prices are expected to remain firm but at a level below the current highs.

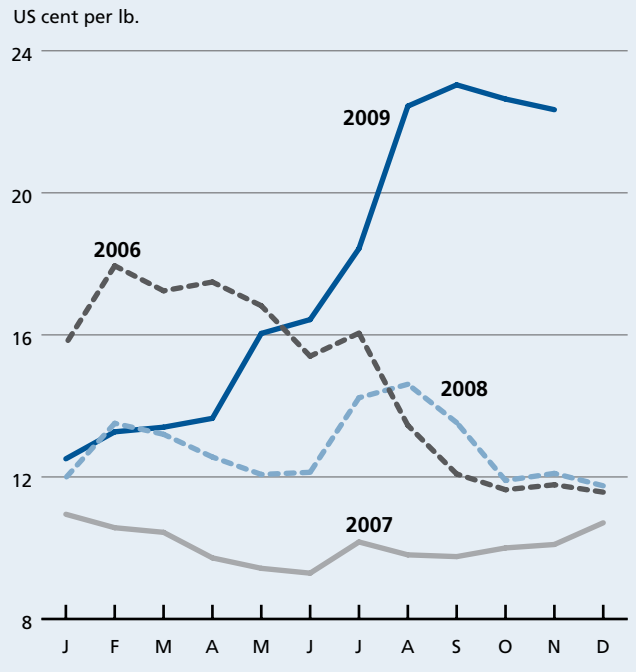
World production and consumption of sugar

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change: 2008/09 over 2007/08
	million tonnes			%
WORLD BALANCE				
Production	167.6	154.7	159.7	3.3
Trade	47.3	49.2	52.1	5.9
Utilization	158.4	160.9	162.6	1.1
Ending stocks	79.9	72.4	68.4	-5.6
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	22.7	23.0	22.9	-0.1
LIFDC (Kg/year)	13.2	13.4	13.4	-0.1
World stock-to-use ratio (%)	**50.4**	**45.0**	**42.1**	

ISA Daily Price Average (US cents/lb)	2007	2008	2009*	Change: Jan-Nov 2009 over Jan-Nov 2008 %
	10.1	12.8	17.7*	37

* January-November 2009

International Sugar Agreement (ISA)



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Meat and meat products market summary

According to the FAO meat price index, world meat prices were on average 8 percent lower in the first ten months in 2009 than in the corresponding period last year but still some 5 percent above the level prevailing in 2007. The index reached its lowest point in February 2009 and since then, has staged a mild recovery, with tendencies diverging across the representative trading markets. Contingent on the consolidation of the world economic upturn, prices may gather momentum in 2010, particularly for beef and pig meat. The forecast of global meat production in 2009 has been revised downwards and is now anticipated to expand only marginally. However, growth may rebound in 2010, largely on the back of relatively strong gains in pig and poultry meat. Poor global import demand is expected to depress world trade in all the various meat categories in 2009 but, overall, a modest recovery is anticipated for 2010.

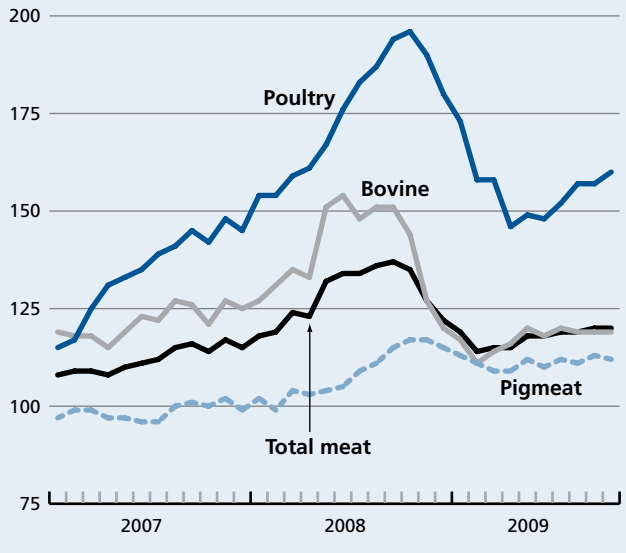
World meat markets at a glance

	2008	2009 estim.	2010 f'cast	Change: 2010 over 2009
	million tonnes			%
WORLD BALANCE				
Production	**280.1**	**281.6**	**286.1**	**1.6**
Bovine meat	65.1	64.3	64.0	-0.5
Poultry meat	91.8	91.9	94.2	2.5
Pigmeat	104.6	106.5	108.7	2.1
Ovine meat	13.2	13.4	13.6	1.7
Trade	**24.5**	**23.1**	**23.7**	**2.5**
Bovine meat	7.0	6.7	6.8	2.0
Poultry	10.2	9.8	10.0	1.8
Pigmeat	6.1	5.5	5.7	4.2
Ovine meat	0.9	0.9	0.9	1.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World *(kg/year)*	42.0	41.7	41.9	0.4
Developed *(Kg/year)*	83.1	81.8	82.2	0.4
Developing *(kg/year)*	30.9	31.0	31.3	0.8

FAO meat price index (2002-2004=100)	2008	2009	2010*	Change: Jan-Nov 2009 over Jan-Nov 2008 %
	128	117*		-8.9

* January-November 2009

Price indices of selected meat products (2002-2004=100)



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Dairy market summary

Dairy prices are on the rise again. Since its recent low in February 2009, the FAO Index of International Dairy Product Prices has gained over 80 percent and now has returned to its level of August 2008. Prices of butter have doubled while prices of cheese and milk powders have increased by 70 percent and over 90 percent, respectively. The reason for rising international prices appears to be declining exports in 2009, mainly from the European Union and the United States, even while the largest exporter, New Zealand, is increasing its deliveries. Global trade is expected to fall by 5 percent in 2009. The contraction coincides with rising demand in Asia and in various oil exporting states, which is further underpinning prices. Over the next few months, the pattern of prices will very much depend on whether the European Union will keep its large stocks of butter and especially skim milk powder off international markets. Global milk production is expected to advance by only one percent in 2009, but to resume a trend growth of about 2 percent in 2010. Dairy product may also rebound and keep price increases in check.

World dairy markets at a glance

	2008	2009 *estim.*	2010 *f'cast*	Change: 2010 over 2009
	million tonnes milk equiv.			%
WORLD BALANCE				
Total milk production	**691.7**	**700.9**	**713.6**	**1.8**
Total trade	**40.5**	**38.6**	**40.6**	**5.2**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World *(kg/year)*	103.7	103.8	104.5	0.7
Developed countries *(Kg/year)*	246.0	248.2	247.6	-0.2
Developing countries *(Kg/year)*	65.6	65.7	67.2	2.2
Trade - share of prod. (%)	5.9	5.5	5.7	

FAO dairy price index (2002-2004=100)	**2008**	**2009**		**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	220	135*		-41

* January-November 2009

Monthly index of international prices of selected dairy products (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

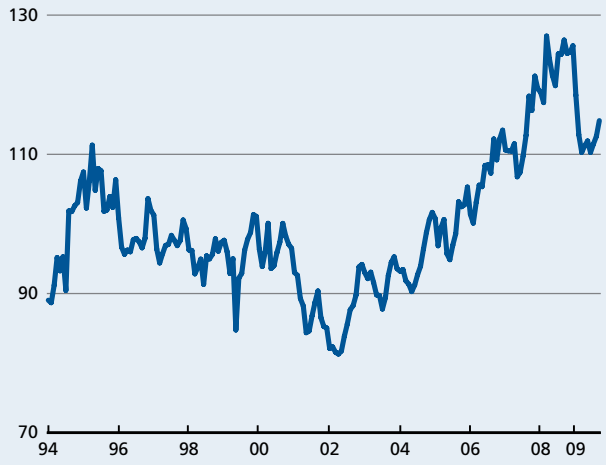
On balance, 2009 has been a challenging year for fisheries following the global economic downturn that induced a general sector-wide demand-led contraction. Although trade is slowly beginning to expand in several key markets, activity remains far below the levels registered in the run up to the recession. As a result, 2009 import values and volumes are forecast to end up lower than those of last year: While the process of recovery in some markets will be lengthy, the outlook for 2010 remains generally positive as does the longer-term trend for fish trade, with rising shares of production in both developed and developing countries entering international markets. The trend in falling fish prices which began in late 2008 appears to have finally abated. Moderate price increases for most species have been registered for several months in succession. This development reflects a resurgence in demand against lower supply potential in the recession-hit farmed fish sector.

World fish markets at a glance

	2007	2008 estim.	2009 f'cast	Change 2009 over 2008
	million tonnes			%
WORLD BALANCE				
Production	**140.4**	**143.0**	**144.1**	**0.8**
Capture fisheries	90.1	89.9	89.8	-0.1
Aquaculture	50.3	53.1	54.3	2.3
Trade value (exports USD billion)	93.5	101.6	93.4	-8.1
Trade volume (live weight)	53.1	52.8	52.3	-0.9
Total utilization				
Food	113.7	115.6	116.6	0.8
Feed	20.4	20.5	20.3	-0.8
Other uses	6.3	6.9	7.2	4.3
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/year)	17.0	17.1	17.1	-0.3
From capture fisheries (kg/year)	9.5	9.3	9.1	-1.5
From aquaculture (kg/year)	7.5	7.9	8.0	1.1
Fish price index [1] (2002-2004=100)	2007	2008	2009 Jan-Sep	Change Jan-Sep 2009 over Jan-Sep 2008 %
	113	123	113	-8.1

[1] FAO University of Stavanger Fish Price Index

FAO UiS fish index (University of Stavanger) (2005=100)



Source: Norwegian Seafood Export Council

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Market assessments

CEREALS

FAO's forecast for world **cereal production** in 2009 now stands at 2 238 million tonnes (including rice in milled terms), confirming it as the second largest crop ever, and putting it just 2 percent below last year's record. Most of the reduction is among coarse grain and rice output, estimated to fall by 3 and 1.9 percent, respectively, while wheat production is seen fractionally below last year's record level. The reduction this year is largely due to smaller plantings, partly in response to generally lower cereal prices after the previous year's exceptionally high levels that prompted many farmers to bring extra land into production, but is also due to adverse weather conditions; most notably the drought in Argentina which has affected both the coarse grains and wheat crops.

An improved global supply situation and generally lower prices are expected to contribute to stronger growth in world **cereal utilization** in 2009/10, bringing the figure to 2 228 million tonnes, up 1.8 percent from last season. World **food consumption** of cereals, representing almost 47 percent of all cereal utilization, is forecast to keep pace with population growth and reach 1 045 million tonnes or around 153 kg of consumption per person per year.

Following a contraction in 2008/09, world **feed utilization** of cereals in 2009/10 is expected to expand by one percent and approach the prior season's level of around 769 million tonnes. The strongest expansion is forecast for the developing countries but slightly higher feed usage is also anticipated in the developed countries; led by wheat in the European Union and the Commonwealth of Independent States (CIS). The usage of coarse grains in animal feed, which represents over 80 percent of total cereal feed use, is forecast to reach 631 million tonnes, marginally higher than in the previous season with feed usage of major coarse grains in the developed countries remaining stagnant, following a 3.7 percent contraction witnessed in the previous season. Among **other uses**, the industrial use of cereals (mostly for the production of starch, sweeteners and biofuels) is likely to register relatively strong growth in 2009/10 but given the difficult global economic conditions, the expansion is expected to be less robust than in recent years.

Based on the latest estimates of cereal production and utilization, world cereal **stocks** by the close of seasons ending in 2010 are forecast to approach 510 million tonnes, the highest level since 2002. While the figure is 7 million tonnes less than the forecast published in June, it nonetheless represents an increase of around 4 million

Table 1. World cereal market at a glance [1]

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	**2 149.1**	**2 284.1**	**2 238.1**	**-2.0**
Trade [2]	**273.0**	**283.2**	**260.2**	**-8.1**
Total utilization	**2 156.6**	**2 189.6**	**2 228.2**	**1.8**
Food	1 012.4	1 031.4	1 044.7	1.3
Feed	769.2	760.9	768.9	1.0
Other uses	374.9	397.2	414.6	4.4
Ending stocks	**426.7**	**505.6**	**509.8**	**0.8**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	151.7	152.7	152.8	0.1
LIFDC (Kg/year) [3]	154.9	156.3	156.4	0.0
World stock-to-use ratio (%)	**19.5**	**22.7**	**22.8**	
Major exporters' stock-to-disappearance ratio (%)	**13.8**	**17.5**	**16.1**	

FAO cereal price index (2002-2004=100)	**2007**	**2008**	**2009**	**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	167	238	174*	-29

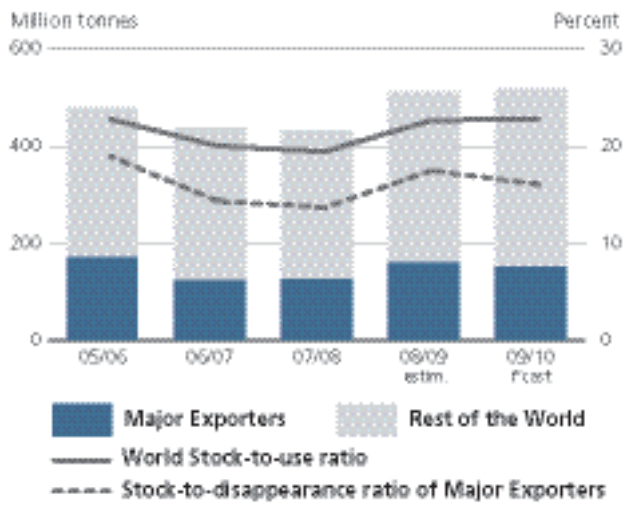
* January-November 2009

[1] Rice in milled equivalent

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

[3] Low-Income Food Defecit Countries

Figure 1. Cereal stocks and ratios



tonnes from the previous season, mostly on account of a continued rise in wheat stocks. At the current forecast level, the **ratio of world cereal stocks to utilization**, an important indicator for global food security, is put at 23 percent, virtually unchanged from the previous season's level and slightly higher than its five-year average.

World cereal **trade** in 2009/10 is forecast to reach 260 million tonnes, down 8 percent, or 23 million tonnes, from the record in 2008/09. The anticipated sharp contraction in world cereal trade is largely due to a fall in wheat transactions, following bumper crops in North Africa as well as strong production gains in several wheat importing countries of Asia. Global wheat trade is now forecast to reach 117 million tonnes, down 16 percent, or 22 million tonnes, from the previous season's record. International trade in coarse grains in 2009/10 is forecast to reach 112 million tonnes, down just 1.5 percent from the estimated level of last season but well below the record of almost 131 million tonnes registered in 2007/08. The early forecast for rice trade in 2010 stands at 31.2 million tonnes, 2.7 percent more than in 2009, sustained by prospects for larger imports by Asian countries. The increase is expected to be met by a surge of exports from Thailand but also China mainland, Myanmar and the Republic of Korea, compensating for lower sales from India and the other traditional suppliers.

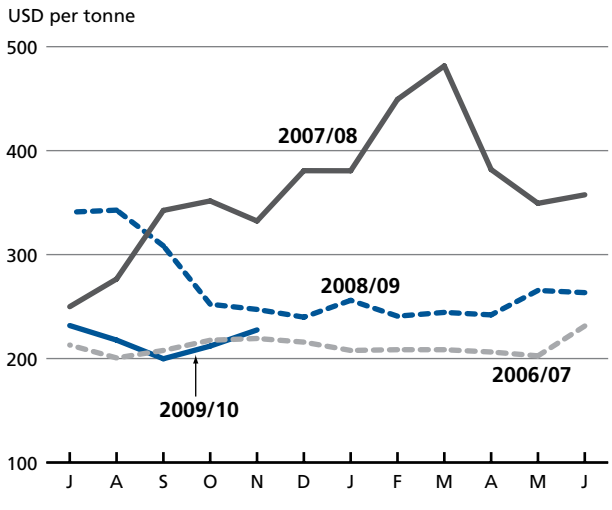
The **FAO Cereal Price Index** averaged 170 points in November 2009, up 3 percent from October but down 38 percent from April 2008 when the index peaked to an all time high of 274 points. The near record 2009 cereal crop and a continuing improvement in the level of world cereal inventories kept cereal prices below levels of last year. However, recent weeks have witnessed a renewed strength in the prices of major cereals, mostly on the back of delays in maize harvesting in the United States, anticipation of a decline in winter wheat plantings and stronger import demand for rice than earlier anticipated. External developments have also been responsible, including a weakening of the United States Dollar and higher prices of soybeans coupled with stronger energy markets.

Table 2. World wheat market at a glance

	2007/08	2008/09 estim.	2009/10 f'cast	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	**625.5**	**681.4**	**678.6**	**-0.4**
Trade [1]	**112.1**	**139.1**	**117.0**	**-15.9**
Total utilization	**644.7**	**647.6**	**665.3**	**2.7**
Food	447.8	455.6	462.9	1.6
Feed	122.6	119.9	125.3	4.5
Other uses	74.3	72.1	77.0	6.9
Ending stocks	143.3	172.3	183.5	6.5
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	67.1	67.5	67.7	0.4
LIFDC (Kg/year)	57.2	57.8	58.3	0.8
World stock-to-use ratio (%)	**22.1**	**25.9**	**27.9**	
Major exporters' stock-to-disappearance ratio (%) [2]	**11.8**	**17.5**	**20.3**	
Wheat price index * (2002-2004=100)	**2007**	**2008**	**2009**	**Change: Jan-Nov 2009 over Jan-Nov 2008 %**
	179	235	154**	-36

* Derived from International Grains Council (IGC) Wheat Index
** January-November 2009
[1] Trade data refer to exports based on a common July/June marketing season
[2] Major exporters include Argentina, Australia, Canada, EU and the United States

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



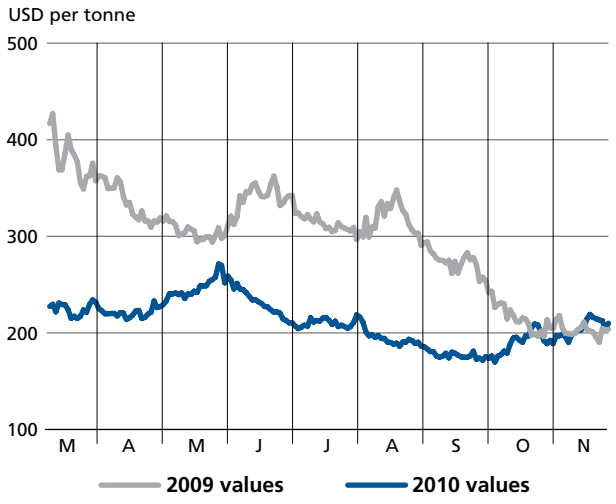
WHEAT

PRICES

International prices rose in recent weeks

This year's solid prospects for world production and large exportable supplies against the backdrop of a sharp reduction in world import demand, acted to push international wheat prices down in the early months of the season. However, wheat prices began rising in October and by late November they stood at some 20 percent above their September values. The recent surge in wheat prices was

Figure 3. CBOT wheat futures for March



mainly driven by developments in other markets, especially maize and rice, but also outside factors such as exchange rates (a weak United States Dollar) and changes in financial markets. In November, the price of **United States' wheat (No.2 Hard Red Winter, f.o.b. Gulf)** averaged USD 228 per tonne, up 14 percent from September. However, this price is still 50 percent down from March 2008, the month when prices peaked to an all time high.

Wheat futures have also strengthened in recent weeks. The increase was in part driven by the weak United States Dollar as the ICE Futures U.S. Dollar Index, a leading benchmark for the international value of the United States Dollar, dipped to a 15-month low in November. In addition, small supplies in Argentina, a major exporter, and delayed winter wheat plantings in the United States, mostly because of the late harvesting of maize as a result of excessive wet conditions, also pushed up prices. By late November, **wheat futures for March 2010 delivery on the Chicago Board of Trade (CBOT)** were quoted around USD 210 per tonne, up 20 percent from September and close to the values quoted for the same period last year.

PRODUCTION

Wheat output in 2009 remains close to last year's record high

FAO's latest forecast for world **wheat output in 2009** now stands at 679 million tonnes, substantially up from earlier expectations and almost equalling the bumper crop gathered last year. Of the wheat crops already harvested, latest estimates in Asia, now point to a significant (6 percent) increase in production following generally above average yields. In North Africa, harvests also turned out better than predicted and the region's crop is now estimated at double last year's reduced level. In North America, the 2009 wheat crop estimate in the United States rose as the season progressed, but despite the realization of above-average yields, the final output is nevertheless 11 percent short of last year's exceptional crop. In Europe, better than expected crops in the Russian Federation and Ukraine contributed to an increase in the continent's 2009 wheat output estimate but again, aggregate output would still fall well short of last year's bumper level. In the southern hemisphere, the major 2009 wheat crops are scheduled to be harvested between now and the end of the year. In South America, production is expected to fall a by 4 percent from last year's already poor level, largely as a consequence of the prolonged drought that has affected Argentina since May. By contrast the outlook remains favourable in Brazil. In Oceania, prospects for the wheat crop in Australia remain favourable and the second largest crop since the 2005 record is anticipated.

In many parts of the northern hemisphere, **winter wheat crops for harvest in 2010** are already at the early stages of development or planting is underway. In the United States,

Table 3. Wheat production: leading producers (2008 and 2009)

Country *	2008 *estim.*	2009 *f"cast*	Change: 2009 over 2008
	million tonnes		%
European Union	150.4	137.1	-8.8
China (Mainland)	112.5	115.0	2.2
India	78.6	80.6	2.6
Russian Federation	61.2	61.0	-0.3
United States of America	68.0	60.4	-11.2
Canada	28.6	24.6	-14.1
Pakistan	21.5	24.0	11.8
Ukraine	24.2	20.5	-15.4
Australia	21.4	22.7	6.2
Turkey	17.8	20.5	15.2
Kazakhstan	16.0	17.0	6.3
Iran, Islamic Rep. of	9.8	13.0	32.7
Argentina	8.3	7.5	-9.6
Egypt	8.0	8.8	10.3
Uzbekistan	6.1	6.5	5.8
Other countries	49.1	59.4	21.0
World	**681.4**	**678.6**	**-0.4**

* Countries listed according to their position in global production (average 2007-2009)

as of mid-November, winter wheat sowing was reported to be almost complete. Although delays had been experienced in some parts due to adverse weather, 64 percent of the crop was rated in good to excellent condition, just marginally down from the same time last year. The final area sown, however, is expected to be down for the second year in succession, reflecting reduced producer price expectations compared with their outlook last year. Although no firm estimates are available yet, early indications suggest that the reduction could be in the region of 3 percent. Similarly, reduced wheat area in 2010 is also expected in the European Union, especially where farmers can switch easily to alternative crops such as oilseeds that could offer better returns. By contrast, among the major producers outside the European Union, especially in East Europe, wheat area is expected to increase in the Russian Federation and remain around last year's good level in Ukraine, as farmers are being encouraged by government support. In Asia, in the two largest wheat producing countries, China and India, the Governments have likewise initiated plans to encourage wheat production through increasing state minimum purchasing prices. Thus, wheat planting in China is thought to have equalled last year's satisfactory level, while in India, a larger area is expected.

TRADE

Sharp fall in global wheat trade in 2009/10

World wheat trade in 2009/10 (July/June) is forecast to reach 117 million tonnes, down by as much as 16 percent, or 22 million tonnes, from the estimated volume last year. The forecast is though some 3 million tonnes higher than FAO's first trade forecast published in June 2009. Relatively low international wheat prices during the early months (July-September) of the season boosted purchases by several countries, resulting in progressive upward revisions to forecasts for 2009/10 trade. Nonetheless, world wheat trade would still remain well below the previous season's record volume mostly because of reduced demand following bumper crops in North Africa and good harvests in the leading wheat importing countries of Asia.

Total wheat imports by Asia are expected to reach 55 million tonnes, down 16 percent, or 10 million tonnes, from the record high in 2008/09, but the second largest since 1992. Much of the decrease is expected to originate in the **Islamic Republic of Iran** where, as a result of a partial production recovery from last year's severe drought, deliveries in 2009/10 are forecast to fall by over 50 percent from the last season's record high. Wheat imports by **Pakistan** are also forecast to be more than halved as a result of a record crop this year and sharply lower imports are similarly anticipated for **Bangladesh** and **Turkey**. In **India**, wheat imports by the private sector could exceed slightly the previous season's small volume but, given this year's record production level and ample stocks, the Government recently announced that it was not planning to import wheat for the time being. By contrast, wheat imports by **Saudi Arabia** are forecast to increase sharply for the second consecutive season. Higher imports are in line with the Government's decision to gradually eliminate wheat cultivation by 2016 in order to conserve scarce water supplies. Following a gradual return to a more comfortable supply situation, some countries in the region are expected to relax their trade restrictions imposed since 2007/08 in response to shortages

Figure 4. Wheat imports by region

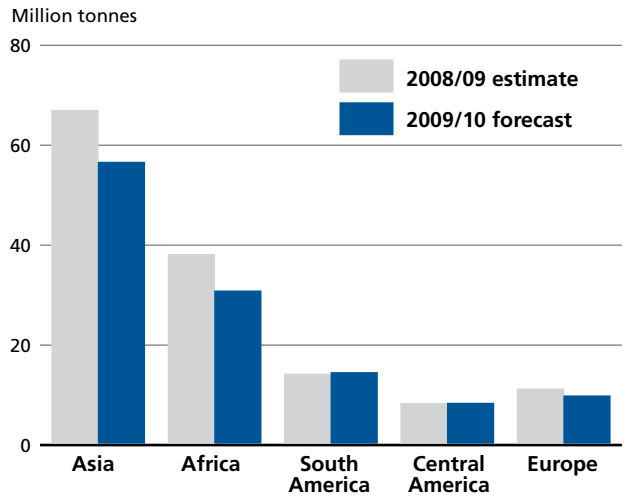
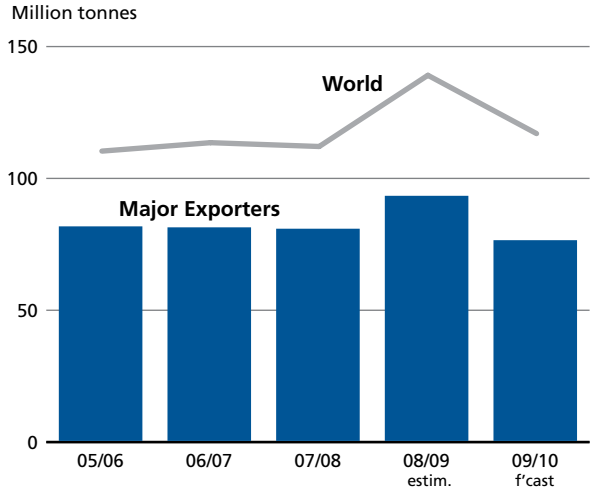


Figure 5. Wheat exports



and high domestic prices. For instance, **Pakistan** has removed a 35 percent export duty on wheat products while **China** lowered export taxes on wheat (to 3 percent) and wheat flour (to 8 percent).

In Africa, wheat imports by **Morocco** could fall by a half from last year because of a record harvest. Above average crops are also likely to lower wheat inflows to **Algeria**, **Egypt** and **Tunisia**. Wheat imports by most countries in Latin America and the Caribbean are forecast to be similar to the previous season with slightly higher imports by a few countries, including **Chile**, **Peru** and **Venezuela.** In **Brazil**, the region's largest buyer, imports are forecast to remain unchanged but the Government has restricted import licences for wheat flour imports from **Argentina**. This is mainly to support the domestic milling industry in the south of Brazil, which is being affected by cheaper flour imports from Argentina. In Europe, aggregate transactions are forecast down from the previous season mostly as a result of a reduction in wheat purchases by the **European Union,** as large carryovers from the previous season have boosted domestic supplies.

In view of the anticipated sharp decline in world import demand in 2009/10, shipments from most exporting countries are forecast to decline. The most significant reduction is forecast for **Argentina** where supplies are extremely tight due to the country's drought-reduced harvest. Exports from the **European Union** are also expected to decline sharply, not only because of lower demand in the traditional importers, but also due to the strong Euro and increased competition from other exporters. By mid-November, cumulative wheat exports since the start of the marketing year from the European Union reached 6.6 million tonnes, 2 million tonnes less than during the same period last year. While smaller exports are also anticipated from **Canada** and the **United States**, shipments from **Australia** could increase, driven by large supplies following two consecutive seasons of good harvests and strong demand from nearby countries; namely **Indonesia**, **Malaysia**, **Thailand** and **Viet Nam**. Elsewhere, wheat exports from **Ukraine** are forecast to decline sharply owing to reduced production while sales from the **Russian Federation** may fall slightly below the previous season's record level. Exports from **Kazakhstan** are forecast to increase, helped by the recent decision of the Government to subsidize shipments to Baltic and Black Sea ports in order to improve export competitiveness.

UTILIZATION

World wheat utilization in 2009/10 to increase at a faster pace than anticipated earlier

World wheat **utilization** in 2009/10 is forecast to reach 665 million tonnes, 10 million tonnes higher than FAO's first forecast published in June and almost 3 percent above the estimated utilization level in 2008/09. At this level, total wheat utilization would also exceed the ten-year average by roughly 2 percent. With world wheat production in 2009 approaching last year's record (contrary to earlier expectations) and large carryovers from the previous season, world wheat supplies have increased. This is expected to contribute to faster growth in wheat utilization than in the previous two seasons, when supplies were tight and prices much higher.

Global **food consumption** of wheat is forecast to reach 463 million tonnes, up 1.6 percent from the previous season. At this pace, world per caput consumption of wheat is forecast to remain stable at around 68 kg. In the developing countries, total wheat used for food is forecast to reach 328 million tonnes. At this level, per caput intake would show a slight increase, from 59.5 kg in 2008/09 to 60.0 kg in 2009/10.

World **feed use** of wheat is forecast to reach 125 million tonnes, up 4.5 percent from 2008/09. This compares with a 2 percent contraction in the previous season. The anticipated increase would mostly reflect a sharp recovery in feed usage of wheat in the Russian Federation. In the European Union, the world's largest user of wheat for animal feed, wheat utilization by the livestock sector is forecast to remain unchanged at the previous season's level at around 56 million tonnes, reflecting weak demand and large supplies of alternative feed grains, in particular triticale, rye and barley.

The **other uses** of wheat, which include seed, industrial usage and post harvest losses, are expected to total around 77 million tonnes, up 7 percent from the previous season. Some of the increase would reflect higher wastage, largely driven by bumper harvests in many countries while the industrial use of wheat is also seen to expand, boosted by stronger demand from the starch industry as well as the ethanol sector, the latter primarily in Canada and the European Union.

STOCKS

World wheat inventories to increase for the second consecutive season

World wheat stocks by the close of the crop seasons ending in 2010 are forecast to reach 183.5 million tonnes,

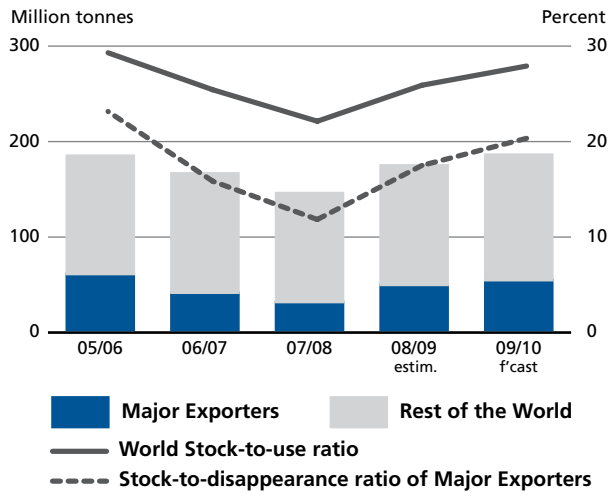
6.5 percent, or 11 million tonnes, higher than their opening level, but down 4 million tonnes from the FAO forecast at the start of the season. The reduction since the previous forecast, published in the June report mostly reflects upward revisions to utilization numbers, made in response to lower prices.

Although world wheat production is expected to register a small decline in 2009 from the record in 2008, it is foreseen to exceed total wheat utilization anticipated in 2009/10. For this reason, stocks are forecast to return to more normal levels, and rise by 28 percent from the estimated low of 143 million tonnes in 2007/08 (the smallest since the early 1980s). Based on the latest forecasts for stocks and utilization, the world **wheat stock-to-use ratio** is also expected to increase, to nearly 28 percent, 2 percentage points higher than in the 2008/09 season and close to the five-year average (2002/03-2007/08). To put the recovery into perspective, this ratio dipped to 22 percent in 2007/08, reflecting the very tight supply and demand balance in that season.

Total wheat stocks held by the major exporters are forecast to reach 52 million tonnes, up 5 million tonnes from their opening level and the highest since 2006. The largest increase is expected in the United States where, despite a fall in production, ending season wheat inventories are likely to increase because of an expected drop in exports and a slight reduction in the domestic feed utilization. Stocks in the European Union are set to decline slightly despite a sharp drop in production and an increase in feed and ethanol utilization. The prospect of significantly less exports than in the previous season is the main reason that wheat stocks in the European Union could remain large. On aggregate, therefore, **the ratio of stocks held by the major exporters to their total disappearance** (i.e. domestic utilization plus exports) is currently forecast to increase to 20.3 percent, up 3 percentage points from the previous season and well above the critically low ratio of just under 12 percent in the high-price 2007/08 season.

Among other countries, near-record exports and a slight contraction in output could result in lower ending stocks (to 6.5 million tonnes) in the Russian Federation. But in China, where the world's largest inventories of wheat are to be found, ending stocks are forecast to increase to roughly 55 million tonnes given this year's record production. In India, another leading stock holder harvesting a record crop this year, inventories are forecast to decline slightly, to 17 million tonnes. Since the beginning of the current season to date, the Government of India under its *Open Market Sale Scheme,* has been releasing wheat from its strategic reserves, to the tune of nearly 4 million tonnes, in order to keep domestic food prices in check.

Figure 6. Wheat stocks and ratios



COARSE GRAINS

PRICES

International prices remain firm

International prices have remained generally firm since the start of the current marketing season and underwent considerable strengthening in recent weeks. Following a short-lived dip in July, prices began to move up slowly, driven by early signs that world production in 2009 would be smaller than in 2008, giving rise to a supply and demand balance sheet for major coarse grains that would be tighter than last season. Delays in harvesting in the United States, caused by excessive wet conditions, added to upward price pressure but the economic slowdown and weaker demand prospects, particularly for feed, restrained the price rise to some extent. The increase in international prices has become more pronounced since October, helped by the slide in the United States Dollar and a rally in oil prices. In November, the **US maize price (No. 2 Yellow, Gulf**) averaged USD 172 per tonne, representing a gain of 13 percent from September, although still down 40 percent from the peak in June 2008.

Prices in the futures market have also shown renewed strength in recent weeks. The strong increase in soybean prices and the expectation of larger demand from the ethanol sector should oil prices rise faster in the coming months were also supportive. By late November, the **March 2010 maize contract at the Chicago Board of**

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

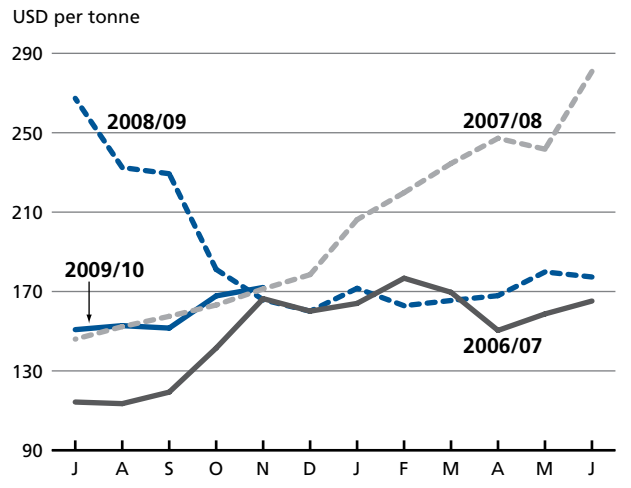


Figure 8. CBOT maize futures for March

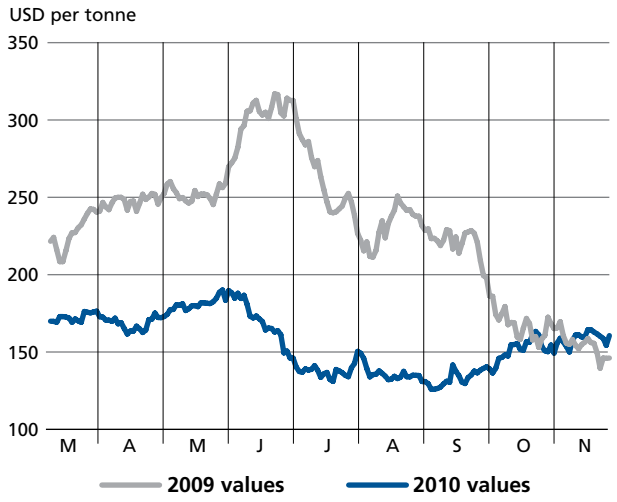


Table 4. World coarse **grains market at a glance**

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	**1 082.4**	**1 143.1**	**1 108.7**	**-3.0**
Trade [1]	**130.8**	**113.7**	**112.0**	**-1.5**
Total utilization	**1 075.3**	**1 095.7**	**1 109.0**	**1.2**
Food	187.6	192.5	192.7	0.1
Feed	634.6	629.1	631.5	0.4
Other uses	253.1	274.2	284.8	3.9
Ending stocks	**172.6**	**208.9**	**205.2**	**-1.8**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	28.1	28.5	28.2	-1.1
LIFDC (Kg/year)	28.9	29.4	29.0	-1.6
World stock-to-use ratio (%)	**15.8**	**18.8**	**18.2**	
Major exporters' stock-to-disappearance ratio (%) [2]	**12.0**	**14.4**	**13.8**	
FAO coarse grains price index (2002-2004=100)	**2007**	**2008**	**2009**	**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	154	211	157*	-27

* January-November 2009

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

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

Trade (CBOT) stood around USD 160 per tonne, up USD 28 per tonne, or 20 percent, above the September average but 5 percent below the corresponding period last year.

PRODUCTION

Coarse grains output down from last year's record but still a satisfactory crop

FAO's latest forecast for world production of coarse grains in 2009 has been revised upwards in recent months and now stands at 1 109 million tonnes. Although down by 3 percent from last year's record, this would still be the second largest crop in history. The upward revision is virtually all attributed to improved yield prospects for the **maize** crop in the United States where generally favourable weather lasted throughout the growing season and this year's crop is now forecast well above last year's level and close to the 2007 record. Elsewhere, among the most significant producers of maize, the latest information confirms mostly smaller maize harvests in 2009, with the exception of the southern African region where, on aggregate, another good harvest was gathered earlier this year. With improved prospects for the United States' maize crop, world maize production in 2009 is now forecast at almost 805 million tonnes, only 1.7 percent down from 2008.

Regarding **barley**, the second most important coarse grain, the latest forecast points to a 4.5 percent decrease in global production in 2009, to some 146 million tonnes. Significant decreases in North America and Europe have more than offset gains in the other main barley producing nations, particularly in the Near East and North Africa.
The forecast of world **sorghum** output in 2009 is put at 60 million tonnes, 8.5 percent down from the previous year's bumper crop, largely on account of a significant reduction in production in the United States after two consecutive good years.

Table 5. Coarse grain production: leading producers (2008 and 2009)

Country *	2008 estim.	2009 f"cast	Change: 2009 over 2008
	million tonnes		%
United States of America	326.5	346.6	6.2
China (Mainland)	175.9	167.2	-4.9
European Union	163.2	153.0	-6.3
Brazil	61.6	53.7	-12.9
India	39.1	34.8	-11.2
Russian Federation	41.7	31.7	-24.0
Mexico	31.9	30.1	-5.7
Canada	27.4	22.5	-17.9
Nigeria	26.0	26.0	0.0
Argentina	27.0	16.7	-38.1
Ukraine	24.4	21.6	-11.6
Indonesia	16.3	17.0	4.4
Ethiopia	12.7	11.2	-11.9
Australia	12.8	12.5	-2.2
South Africa	13.7	12.8	-6.3
Other countries	142.8	151.3	5.9
World	**1 143.1**	**1 108.7**	**-3.0**

* Countries listed according to their position in global production (average 2007-2009)

Figure 9. Coarse grain imports by region

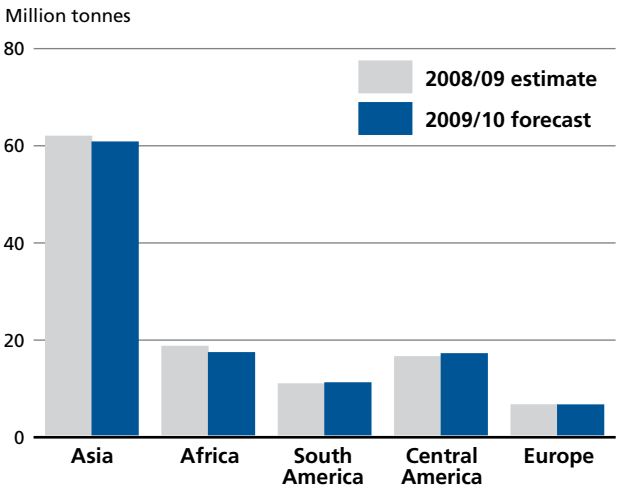
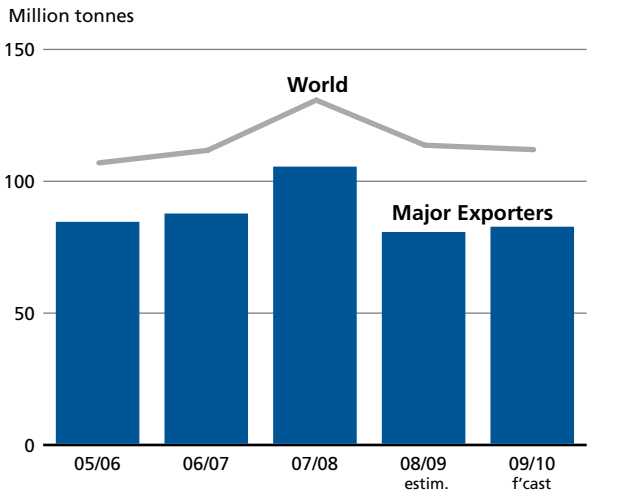


Figure 10. Coarse grain exports



TRADE

World trade in coarse grains to decline slightly in 2009/10

World trade in coarse grains in 2009/10 (July/June) is forecast to reach 112 million tonnes, down slightly from the estimated trade volume in 2008/09 but well below the record level of nearly 131 million tonnes in 2007/08. Most of the anticipated decline is expected in barley and to a lesser extent in sorghum while trade in maize is forecast to increase. World **maize** trade is expected to approach 86 million tonnes, up around 2 percent from the previous season but 16 percent below the 2007/08 all-time high. Higher maize imports are forecast for Canada and several countries in Latin America and the Caribbean. Trade in **barley** is forecast to reach 18 million tonnes, down 11 percent from last season's exceptional level, mostly on account of larger production in a number of leading importing countries in North Africa and Asia. Trade in **sorghum** is forecast to fall to 5.5 million tonnes, down 8 percent from the previous season and as much as 45 percent less than the record volume traded in 2007/08. Fewer transactions in sorghum principally reflect reduced demand for feed in the major destinations of the European Union, Japan and Mexico. For other coarse grains, trade is forecast to be smaller for **oats** at around 2 million tonnes, but steady for **rye** and **millet**, at 440 000 tonnes and 205 000 tonnes, respectively.

On a regional basis, imports of coarse grains by Africa are forecast to decline most, mainly because of bumper crops in several countries in the north of the continent: **Morocco**, in particular, where barley production was at a record. In sub-Saharan Africa, smaller imports by many countries, including **Botswana**, **Mozambique**, **Zambia** and **Zimbabwe,** are forecast to more than offset increases by countries in the eastern subregion that have been affected by drought. In Asia, total imports are forecast down only slightly from the record in 2007/08 and that, mainly by the **Syrian Arab Republic** following a recovery in domestic barley production;

in the **Islamic Republic of Iran** due to a slight increase in production of barley and maize; and in the **Philippines,** following a record maize crop this year. In Latin America and the Caribbean, **Mexico** is seen to import more maize because of lower production and strong demand. Higher maize imports are also forecast for **Chile**, **Colombia** and **Peru**, which, combined more than offset declining imports by **Brazil,** which has emerged as a major maize exporter, and **Venezuela** on account of a bumper domestic maize production.

Given the current trade prospects for 2009/10, **export supplies** are ample enough to meet world import demand for all coarse grains. Among the major exporters only shipments from the **United States** are forecast to increase significantly, by over 7 million tonnes, while sales from **Argentina** could drop sharply because of supply shortfalls as a result of a 40 percent dip in domestic production. In Argentina, while export restrictions on maize have been eliminated recently, the Government will grant export permits in 2009/10 only in exchange for a commitment from exporters to guarantee 8 million tonnes of maize for the domestic market. Export sales by **Australia**, **Canada** and the **European Union** are likely to remain steady but much lower barley exports are anticipated from the **Russia Federation,** while shipments of maize from **Ukraine** are also expected to decline because of reduced production. In **Brazil**, where this year's maize output fell below last year's record, exports are still expected to be larger than the volume of the previous season due to adequate domestic supplies and slow sales from Argentina. Among the minor exporters, **Malawi** is expected to sell some 200 000 tonnes of maize to neighbouring countries following a record domestic harvest this year supported by the Government's lifting of a ban on exports in September. A bumper maize crop in **Zambia** also resulted in the removal of its maize export ban which is expected to lead to at least 260 000 tonnes of exports.

UTILIZATION

Slower growth in total utilization as feed use stagnates

World utilization of coarse grains in 2009/10 is forecast to increase by 1.2 percent from the previous season. This compares with almost 2 percent growth in 2008/09 and well over a 5 percent expansion in 2007/08. The deceleration in total utilization of coarse grains mainly stems from weaker demand from the livestock sector along with a slower increase in the use of grains for the production of ethanol.

Total **feed utilization** of coarse grains in 2008/09 is forecast to reach 632 million tonnes, up by less than

Figure 11. Barley exporters

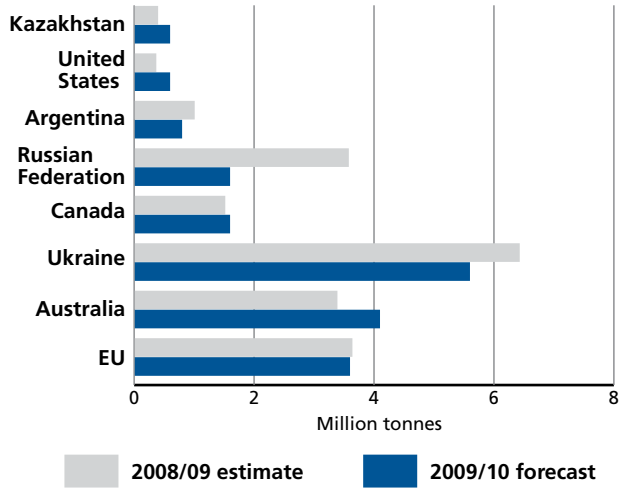


Figure 12. Coarse grain utilization

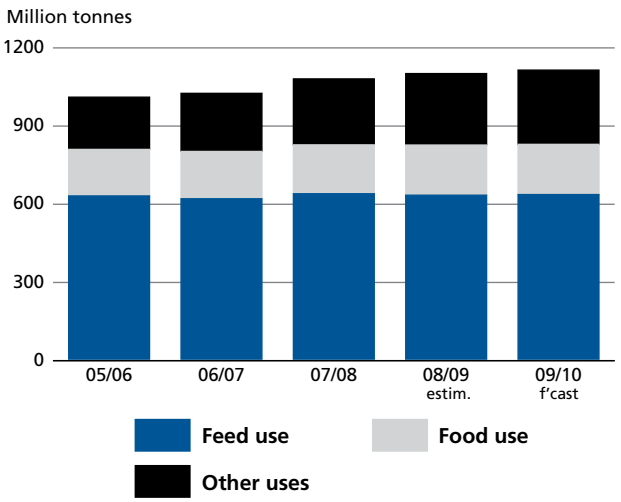
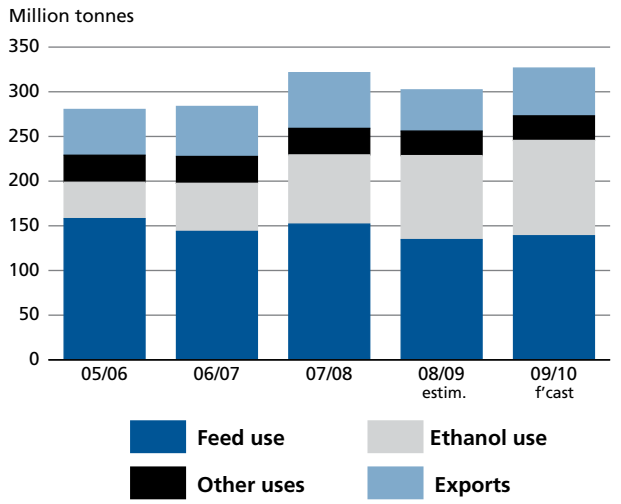


Figure 13. Maize utilization and exports in the United States



one percent from the previous season. Such tepid growth reflects the impact of economic problems in the United States and several other industrial countries which have dampened the demand for meat and other animal products, and therefore, the overall demand for feed. Large supplies of feed wheat as well as non-grain alternatives including Dried Distiller Grains (DDG), a by-product of maize-based ethanol manufacturing, are also considered important factors bearing down on feed usage of coarse grains in 2009/10. In fact, feed utilization of coarse grains in the developed countries is forecast to remain very much subdued from the previous season's reduced level while among developing countries, the small anticipated increase in this season's feed usage is likely to be driven mostly by Asia and, primarily China.

World **food consumption** of coarse grains is forecast to remain unchanged from the previous season, at around 193 million tonnes. This forecast is slightly higher than was anticipated at the start of the season but with improvements in production prospects, consumption estimates have also been revised up. At the current forecast levels, global food consumption of coarse grains on a per caput basis is expected to average around 28 kg, similar to the previous season, with generally steady levels of consumption regionwide.

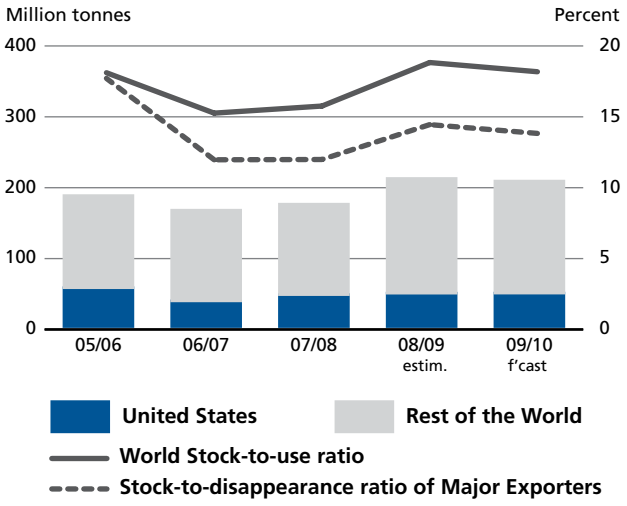
Among the other usage categories, **industrial applications** of coarse grains, maize in particular, is likely to again demonstrate a brisk growth. The increase will be largely driven by continued strong demand from the fuel ethanol sector, most of which in the United States, where almost 107 million tonnes of maize is expected to be procured for processing into ethanol, up 14 percent from 2008/09. This growth, although robust, is slower than has been experienced in recent years.

STOCKS

World stocks decline but less than anticipated

On the basis of the latest forecasts for production and utilization, global inventories of coarse grains for crop years ending in 2010 are forecast to reach 205 million tonnes, down 1.8 percent from their opening but still the second largest level since 2001. The forecast for the season's ending stocks has been raised by 3 million tonnes since the previous report in June mostly because of upward adjustments to forecasts for maize production in the United States. World **maize** stocks are likely to decline by around 2 million tonnes, to 158 million tonnes. **Sorghum** inventories could also fall slightly, to just under 6 million tonnes, but stocks of **barley** are seen to increase marginally, to 31 million tonnes.

Figure 14. Coarse grain stocks and ratios



For major exporters, ending stocks are forecast to reach 78 million tonnes, down 2 million tonnes from their relatively high opening levels. While carryovers in the **United States** are likely to remain unchanged, at around 47 million tonnes, some reductions are anticipated in **Canada** (for barley and maize) and in the **European Union** (maize). At the current forecast level, the **ratio of major exporters' stocks to their total disappearance** (i.e. domestic utilization plus exports), could decline slightly from the previous season's level, to around 14 percent, but should exceed the low level registered in 2007/08 by almost 2 percentage points.

The small reduction in total coarse grains' inventories in major exporting countries is partly offset by increases in North Africa and in several Asian countries, reflecting strong production in 2009. Maize inventories are forecast to increase in Africa, mostly in **South Africa**, and in Asia, mainly in **China** and **Indonesia**, but to decline in Latin America and the Caribbean, primarily in **Brazil**. Barley inventories are expected to end the season higher in **Algeria** and **Morocco** while in the **Russian Federation** and **Ukraine** they are heading for a decline.

RICE

INTERNATIONAL PRICES

Strong import demand pushes up international prices in November after several months of declines

After several months of slow but steady declines, international rice prices started rebounding in

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

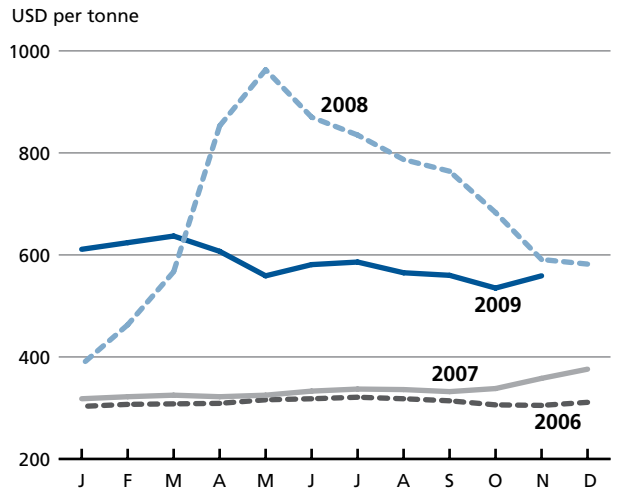
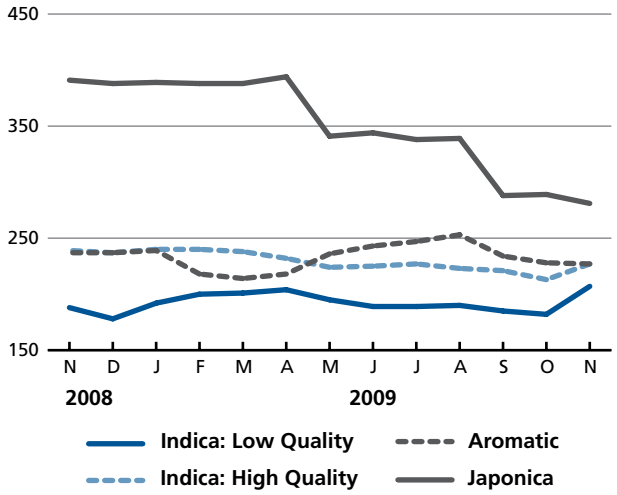


Figure 16. FAO rice price indices (2002-2004=100)



November 2009, coinciding with several announcements by the Philippines that it would bid for around 2 million tonnes of rice imports in various tranches. The market was further stirred by rumours that the Government of India was approaching the authorities of major exporting countries to secure several million tonnes of rice. Although the prospect of India entering the global market to buy large volumes has yet to be confirmed, the news was sufficient to lift world prices in a period usually associated with abundant supplies and falling quotations. The price strength was particularly evident for lower quality Indica, the type the Philippines is buying, which pulled the index for this category upwards by 14 percent between October and November. As an example, Indica with 25 percent brokens, fob Viet Nam, was quoted USD 433 per tonne in November, up from USD 360 per tonne in October. Although more contained, increases were also witnessed for similar quality rice in Pakistan and Thailand. Some of the price strength was transmitted to the higher quality Indica rice, the index of which gained 7 percent in November, with the benchmark Thai white rice 100 percent B rising by USD 24 per tonne to USD 559 per tonne. On the other hand, Japonica and aromatic rice varieties were little affected.

Despite the recovery, world rice prices in November were some 12 percent lower than one year ago. Indeed, over the January-November period, the FAO All Rice Price Index fell back by 15 percent, driven in particular by lower quotations for Indica, which lost ground on average by 35 and 24 percent for low quality and high quality types respectively. Aromatic rice prices were also 8 percent weaker, but quotations of Japonica rice averaged 12 percent more than last year.

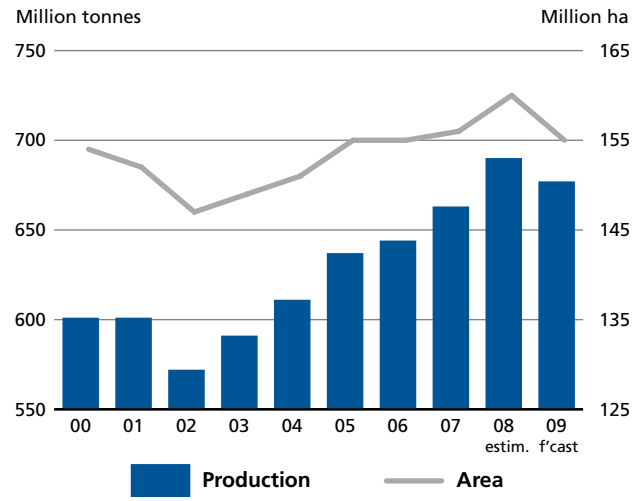
PRODUCTION

An erratic monsoon largely behind a forecast contraction of world rice production in 2009

In the past few months not only was the pattern of the southwest monsoon, which determines much of the season's paddy output in several of the major producing countries, erratic, but a series of natural disasters, from earthquakes and landslides to hurricanes, also impaired rice crops across several regions. As a result, the global paddy production outlook has worsened substantially since the release of the June issue of Food Outlook, and now stands at 675 million tonnes (451 million tonnes, milled basis), 13 million tonnes, or 1.9 percent less than in 2008. Despite the contraction, production in 2009 would still stand out as the second highest after the record 2008 season. Furthermore, should rice prices peak up in the coming months, plantings of the secondary crops may well expand beyond current expectations, as witnessed in 2008, which would boost global production in 2009 further.

Much of the world production decline is expected to be concentrated in Asia, where output may fall from 624 million tonnes in 2008 to 609 million tonnes in 2009. **India** was particularly hit by the irregularity of monsoon rains , beginning with drought or below average rainfall, followed by torrential rains and floods, bringing about a sharp reduction to the country's main Kharif crop. Although the area under the 2009 secondary Rabi crop, now at the planting stage, is likely to be raised, India is expected to harvest 128 million tonnes of paddy (85 million tonnes, milled basis) over the full 2009 season, 21 million tonnes, or 14 percent, less paddy than in 2008.

Figure 17. Global rice paddy production and area



Several other countries in the region also faced severe production shocks in the past few months. In some cases the losses are expected to be compensated through larger 2009 secondary crops, now at the planting stage. On balance, total rice production is expected to fall below last season's level in **Bangladesh, the Chinese Province of Taiwan, Iraq, Japan, Nepal, Pakistan, the Philippines** and **Sri Lanka**. By contrast, the outlook for 2009 production is positive in **Afghanistan**, **Cambodia, mainland China, the Democratic Republic of Korea, Indonesia, the Islamic Republic of Iran, Lao People's Democratic Republic, Myanmar, the Republic of Korea, Thailand** and **Viet Nam**, generally driven by favourable returns on rice compared with other crops, which have fostered an expansion of plantings.

Weather conditions in Africa have been less favourable this season than in 2008, which, together with a cut of the rice area in **Egypt**, may bring production in the region down by 3 percent to 24.6 million tonnes. Extensive drought problems are estimated to have depressed production in eastern Africa, especially in the **United Republic of Tanzania**. However, the outlook for production is positive in western Africa, where many governments have maintained the subsidies on seeds and fertilizers introduced in 2008. As a result, gains in production are forecast across the subregion, in particular in **Ghana, Guinea, Mali, Nigeria** and **Senegal.** In Southern Africa, **Madagascar, Mozambique** and **Zambia** have harvested bumper crops.

Prospects are buoyant in the other continents. In Latin America and the Caribbean, production in 2009 is estimated to reach 27.4 million tonnes, almost 4 percent more than last year. In Central America and the Caribbean, the hurricane period in the Northern Atlantic Ocean, which normally ends on 30 November, was relatively benign, as only **El Salvador** and **Nicaragua** were reported to have suffered some limited rice losses from the passage of hurricane Ida in early November. However, within the subregion, **Mexico** alone is foreseen to experience a decline in output this season, reflecting widespread drought in recent months and heavy rainfall subsequently. In South America, with the exception of **Guyana, Uruguay** and **Venezuela**, all countries are estimated to harvest larger crops in 2009, with especially strong gains recorded by **Argentina, Bolivia, Brazil, Colombia** and **Peru**. However, in the wake of a recurring El Niño, the outlook for regional production in 2010 has worsened. Indeed, with the planting of the new crops underway, a prevailing drought and well below average water reserves are constraining the area sown to rice in **Argentina, Brazil** and **Uruguay**, which may bring about a decline in production next season.

In North America, the most recent forecast from the **United States** pointed to a 7 percent increase in output, sustained by an expansion of medium grain rice. In Europe, prospects are excellent for the **European Union** and the **Russian Federation**, which are both expected to harvest their largest crops in the decade so far. In Oceania, production also rose in **Australia**, although limited water availability restrained it to a fraction of what it was at the beginning of the decade. The country's outlook for 2010 remains subdued as winter rainfall in key growing regions was again below normal.

INTERNATIONAL TRADE

Rebounding world import demand to underpin world rice trade in 2010

The current forecast for international rice trade in the calendar year 2010, at 31.2 million tonnes, points to a 2.7 percent, or 800 000 tonnes, increase from the 2009 estimate and much higher than forecast last June. The revision reflects larger import requirements by those countries that faced important crop losses in recent months. If confirmed, trade next year would be the second largest after 2007.

Much of the expected growth is expected to be driven by larger imports by Asian countries, which are foreseen to reach 14.8 million tonnes on aggregate, almost 7 percent more than last year. Part of the increase would stem from increased purchases by Near East Asian countries, in particular **Iraq, Saudi Arabia** and **the United Arab Emirates**, while rice flows into the **Islamic Republic of Iran** may be depressed by large domestic availabilities

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

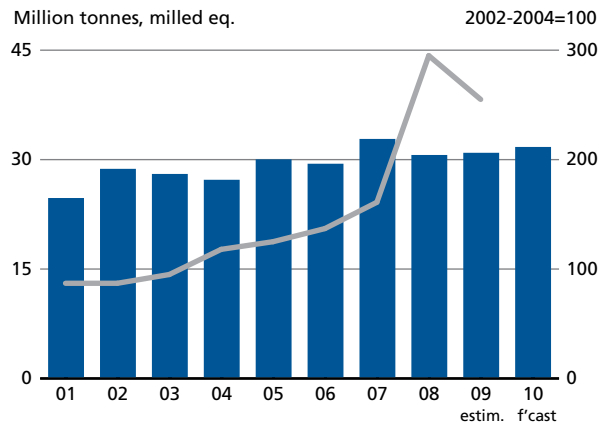
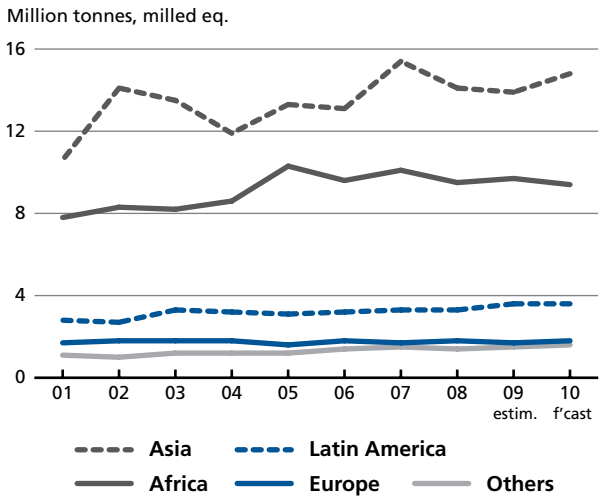


Figure 19. Rice imports by region



and a recent increase in the basmati rice tariff. Among countries in the Far East, imports by **Bangladesh**, **Nepal** and especially **the Philippines** are forecast to rise to offset recent losses from natural disasters. In the case of the Philippines, they are currently forecast to reach 2.3 million tonnes, up 28 percent from 2009 with over 2 million tonnes already being tendered by the National Food Authority in 2009 for delivery in 2010. Imports by **India**, are expected to be in the order of 100 000 tonnes only, as high international prices compared with domestic prices and the fact that the Government can draw from its large rice and wheat stocks to compensate for the 2009 rice production shortfall, limit the chances of greater imports.

On the other hand, good prospects for crops this season may result in a 3 percent reduction of imports by countries in Africa, especially **Guinea, Mali, Mozambique** and **Senegal**. In Latin America and the Caribbean**,** rice imports may rise slightly, sustained by **Brazil** and **Mexico**, where the smaller crops along with strong currencies are likely to result in greater rice deliveries**,** while those destined for **Colombia, Cuba** and **Peru** are expected to fall. Rice purchases by the **European Union** are forecast to rise by 100 000 tonnes to 1.3 million tonnes in 2010, which would turn the region into the third largest destination of rice trade, after the **Philippines** and **Nigeria** and on a par with **Saudi Arabia**.

Figure 20. Indian rice domestic prices still below international levels

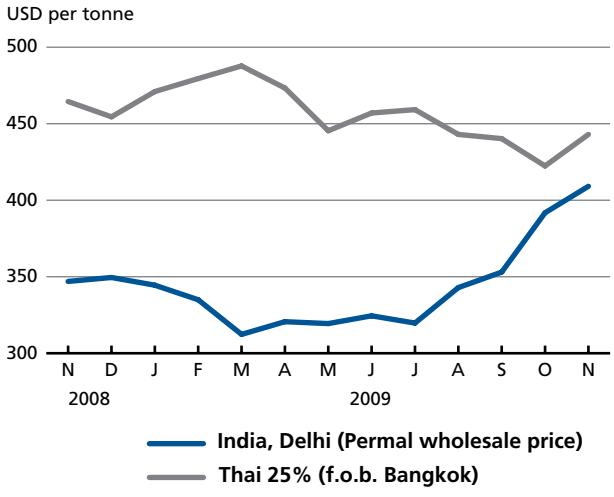
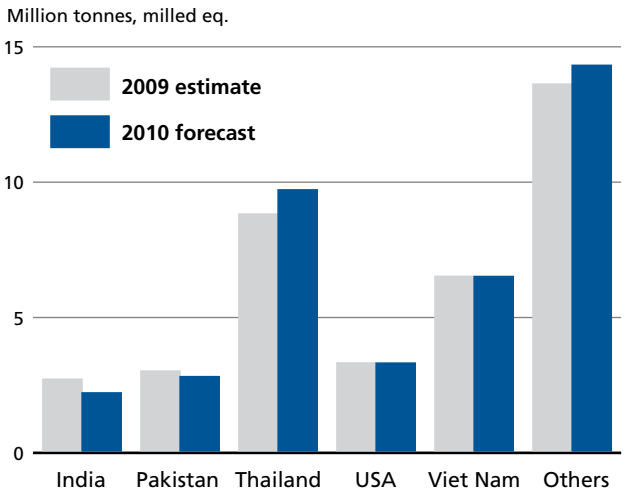


Figure 21. Rice exports by the major exporters



The increase in import demand is anticipated to be met by a surge of exports from **Thailand** but also **China mainland**, **Myanmar** and **the Republic of Korea**, which are all estimated to hold abundant supplies. By contrast, exports are predicted to fall to 2 million tonnes in **India**, where the Government is likely to maintain its tight restrictions on external sales, allowing only Basmati rice shipments. Exports from **Brazil**, **Cambodia**, **Egypt**, **Pakistan** and **Uruguay** are also foreseen to decline compared with 2009, as all those countries are anticipated to face tight market conditions next year. Shipments from the **United States** are also forecast to be smaller.

UTILIZATION

Rice consumption to expand at same pace as population

Total rice utilization, including food, feed and other uses, is anticipated to reach some 454 million tonnes in 2010, 8 million tonnes more than consumed in 2009. Virtually all of the increase is expected in food consumption, which is forecast to absorb 389 million tonnes next year compared with 383 million tonnes in 2009. The increase, however, would be barely sufficient to meet the needs of the world's growing population and would keep average per caput intake unchanged at around 57.3 kg.

Among different economic groups, per caput rice consumption is also anticipated to remain stable in developing and developed countries at around 68 and 13 kg per year, respectively. The sustained level of world demand for rice confirms the little responsiveness of rice consumption to changes in prices or incomes. Indeed, retail or wholesale prices in many countries have remained stubbornly high, a situation that has been made worse by rising unemployment even in those countries where the economic recovery is underway. However, these factors are having weaker implications for rice than for more expensive food items such as livestock products. To some extent, the widening of subsidized food distribution, to benefit larger segments of the population in countries such as **Bangladesh**, **India**, **Indonesia, the Philippines** or **Venezuela**, will likely contribute to the sustaining of rice consumption across the world.

Table 6. World rice market at a glance

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE (milled basis)				
Production	**441.2**	**459.6**	**450.8**	**-1.9**
Trade [1]	**30.1**	**30.4**	**31.2**	**2.7**
Total utilization	**436.6**	**446.3**	**453.9**	**1.7**
Food	377.0	383.3	389.1	1.5
Ending stocks	**110.8**	**124.4**	**121.1**	**-2.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	56.9	57.2	57.3	0.2
LIFDC (Kg/year)	69.4	69.6	69.7	0.1
World stock-to-use ratio (%)	**24.8**	**27.4**	**26.2**	**-4.4**
Major exporters' stock-to-disappearance ratio (%) [2]	**17.5**	**20.6**	**14.3**	**-30.6**
FAO rice price index (2002-2004=100)	**2007**	**2008**	**2009**	**Change: Jan-Nov 2009 over Jan-Nov 2008 %**
	161	295	253*	-15.1

[1] Calendar year exports (second year shown)

[2] Major exporters include India, Pakistan, Thailand, the United States of America 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/es/esc/en/15/70/highlight_71.html

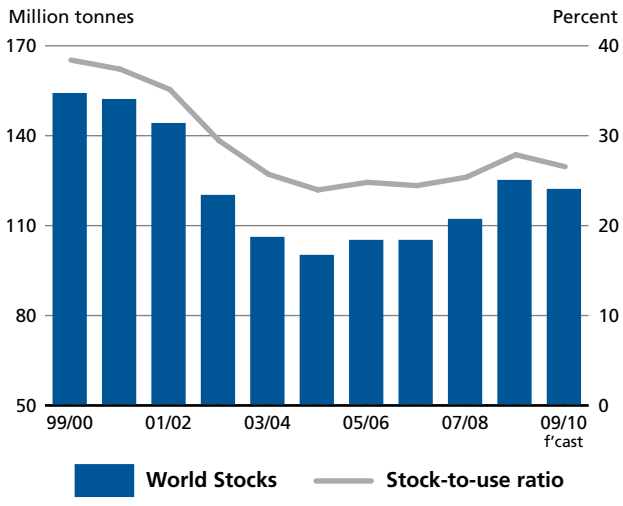
* January-November 2009

STOCKS

Global reserves in 2010 likely to fall, while still remaining large

Under current prospects, world production in 2009 would fall short of global rice utilization in 2010 by around 3 million tonnes, which would need to be met by world reserves. As a result, rice carryover stocks at the close of the marketing

Figure 22. Global rice closing stocks and stock-to-use ratio

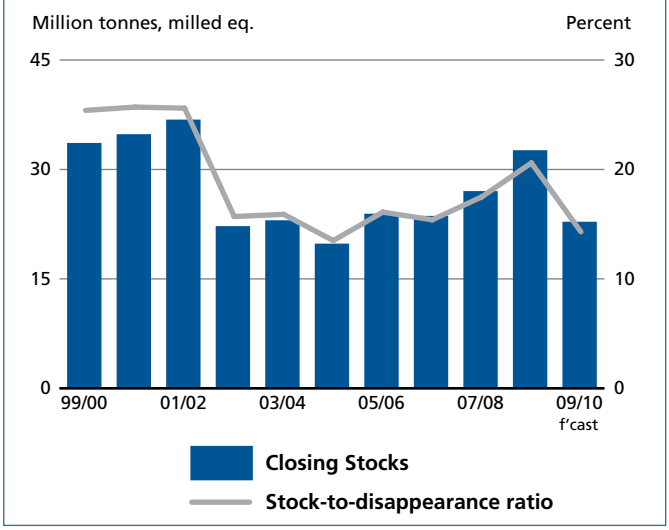


seasons ending in 2010 are anticipated to shrink from 124 million tonnes in 2009 to 121 million tonnes this year, still high if compared with the 110 million tonnes held on average between 2002 and 2009.

A sizeable part of the contraction this year will be on account of **India**, which is expected to draw more than 9 million tonnes from its reserves to fill the gap between production and consumption. As a result, the country may carry over as much as 12 million tonnes at the end of its season on 30 September 2010, down from 21 million tonnes a year earlier, but not much different from the volumes held between 2003 and 2007. Other countries are anticipated to reduce the size of their inventories, in particular **Bangladesh**, **Egypt**, **Myanmar**, **the Philippines** and **Viet Nam**. By contrast, good crops in 2009 are expected to boost stocks in **China mainland, Colombia, Indonesia, Mali, the Republic of Korea** and **the United States**. Likewise, large imports would enable **Brazil, the European Union, Saudi Arabia, and the United Arab Emirates** to increase the size of their rice reserves.

At the forecast level of 121 million tonnes, the world stocks-to-use ratio would be around 27 percent, slightly below the level last year but still adequate enough to provide a good degree of food security at the global level. However, because much of the stock decline is anticipated to affect several of the five major exporting countries (India, Pakistan, Thailand, Viet Nam and the United States), the stocks-to-disappearance ratio for this group may significantly deteriorate, from 21 percent in 2009 to 14 percent in 2010, the lowest witnessed since 2005. Accordingly, a much smaller ratio would signal a tightening of world market conditions in the course of 2010.

Figure 23. Stocks held by the five major rice exporters may drop substantially in 2010



CASSAVA

PRICES

International quotations on the rise

After falling to 30-month lows at the beginning of 2009, prices of internationally traded cassava products have since staged a sharp rally. The most pronounced increase has been registered in quotations for **Thai cassava chips** (destined for China), which have risen by 53 percent since January 2009, reaching USD 168/per tonne in November 2009. Over the same period, prices of **Thai cassava flour** and **starch** (f.o.b. Bangkok) rose by 35 percent and are currently at some USD 338 per tonne. Such has been the strengthening in quotations, that they are, on average, less than 20 percent below the historic highs of mid-2008.

Some of the strength of the Thai reference export prices has to do with the value of the Thai currency, which over the past six months has risen by 7 percent against the United States Dollar. However, a multitude of other developments have assisted. Among domestic factors, the Ministry of Commerce of Thailand intervened by purchasing 13 million tonnes of fresh roots (approaching half the entire crop), in the wake of a record cassava harvest. Beyond Thailand's borders, a shift in cereal policy in China - the world's

Table 7. World cassava market at a glance

	2007	2008 *estim.*	2009 *f'cast*	Change 2009 over 2008
	(million tonnes fresh root equiv)			%
WORLD BALANCE				
Production	**217.5**	**233.4**	**242.1**	**3.7**
Trade	**44.8**	**37.8**	**49.8**	**31.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption				
World (kg/year)	17.5	18.6	19.1	2.5
Developing (kg/year)	22.2	23.5	24.1	2.4
LDC (kg/year)	60.8	65.9	64.5	-2.1
Sub Saharan Africa (kg/year)	94.2	103.7	103.6	0.0
Trade - Share of prod (%)	20.6	16.2	20.6	27.0
FAO cassava prices	**2007**	**2008**	**2009***	**Change:** Jan-Nov 2009 over Jan-Nov 2008
		USD/tonne		%
Chips (shipments to China)	136.0	171.1	134.1	-21.7
Starch (f.o.b. Bangkok)	303.1	383.6	271.7	-29.2
Thai domestic root prices	45.7	57.2	39.5	-31.0

Source: Thai Tapioca Trade Association
* January-November 2009

Figure 24. International cassava and Thai domestic prices

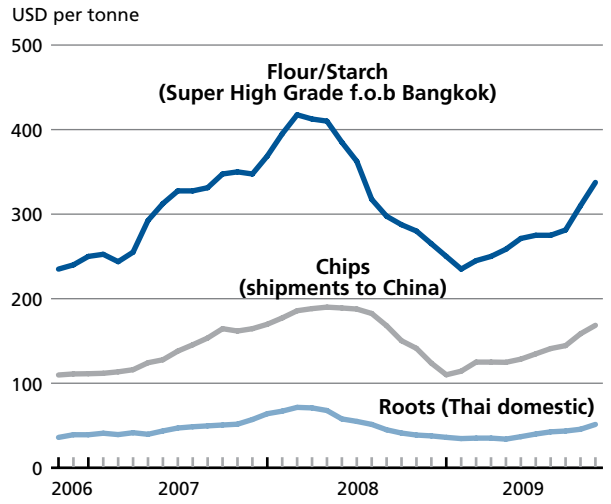


Figure 25. Feed ingredient prices

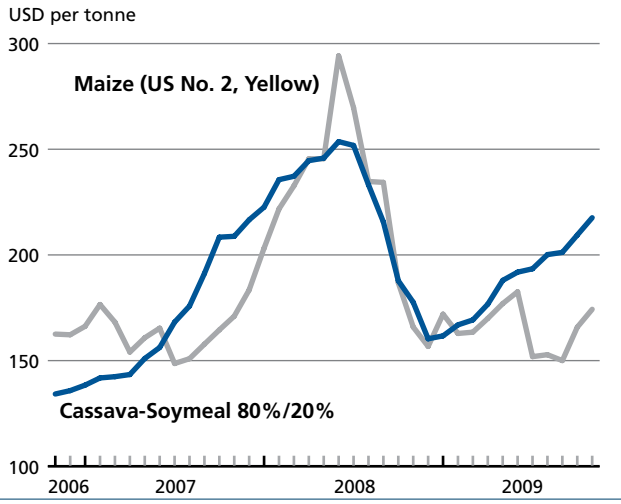
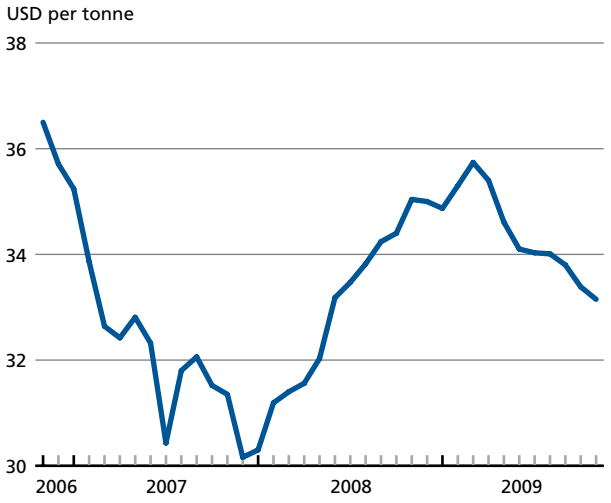


Figure 26. Thai Baht - US dollar exchange rate



principal buyer of cassava products, has led to an escalation in domestic maize prices, boosting the competitiveness of Thai cassava starch and chips. The demand-led rally in international prices also reflects a resurgence in the use of cassava chips as a feedstock for ethanol distilleries in Asia. Promising ethanol returns, combined with higher crude oil prices throughout much of the year, have buoyed the demand for cassava in energy and alcohol production.

The upturn in quotations could have been even more pronounced were it not for the continued slump of demand for feed pellets in traditional import markets. Cassava blended with protein rich-meals is an effective substitute for coarse grains and wheat, but ample feed grain supplies and falling grain prices in the European Union, the traditional destination of cassava feed products, has strained the local competitiveness of imported cassava pellets in European Union member countries.

The upward trend in cassava product prices is expected to continue in the near term, though much will rest on the recent reform of the support regime to Thailand's cassava sector and also of policies in China to sustain domestic grain prices. Large stockpiles of exportable cassava products in Thailand as well as in Viet Nam will bear down on prices, but ultimately the prospect of a smaller cassava crop in Thailand in the following season should provide support to prices. So too will a revival in the demand for cassava as a feedstuff in rising livestock production and as a feedstock in energy production, which are both being realized on the back of improving economic environments.

PRODUCTION

Food and energy security endeavours propel global production

Global cassava production in 2009 is forecast at 242 million tonnes, 4 percent above the record of the previous year. The high price episode of 2007/2008 for traded food staples reminded policy-makers in many vulnerable countries, as well as the international community, to look toward indigenous crops as an alternative source to potentially expensive and volatile cereals. Among these crops, cassava has been at the forefront. As a 'crisis crop', cassava roots require few inputs, can be left in the ground for well over one year and harvested when food shortages arise or when prices of preferred cereals become prohibitive. These attributes are behind an anticipated expansion of output in **Africa,** of about 3 percent, to some 121.5 million tonnes in 2009.

Government food-security initiatives with the support of international donors could see production reach new heights throughout the continent. Support often takes the form of

Table 8. World cassava production

	2006	2007	2008*	2009**
		(000 tonnes)		
WORLD	**224 483**	**217 536**	**233 391**	**242 069**
Africa	**117 449**	**104 952**	**118 461**	**121 469**
Nigeria	45 721	34 410	42 770	45 000
Congo, Dem. Rep. of	14 989	15 004	15 020	15 036
Ghana	9 638	9 650	9 700	10 000
Angola	8 810	8 800	8 900	9 000
Mozambique	6 765	5 039	8 400	9 200
Tanzania, United Rep. of	6 158	6 600	6 700	6 500
Uganda	4 926	4 456	4 942	4 500
Malawi	2 832	3 239	3 700	4 000
Madagascar	2 359	2 400	2 405	2 000
Other Africa	*15 251*	*15 354*	*15 923*	*16 233*
Latin America	**36 311**	**36 429**	**37 024**	**36 606**
Brazil	26 639	26 541	26 600	26 000
Paraguay	4 800	5 100	5 300	5 400
Colombia	1 363	1 288	1 444	1 500
Other Latin America	*3 509*	*3 500*	*3 680*	*3 706*
Asia	**70 465**	**75 882**	**77 631**	**83 715**
Thailand	22 584	26 411	25 156	30 088
Indonesia	19 987	19 988	20 269	20 500
Viet Nam	7 783	7 985	8 300	8 600
India	7 620	8 429	8 959	9 200
China, mainland	7 500	7 875	8 300	8 700
Cambodia	2 182	2 215	3 604	3 275
Philippines	1 757	1 871	1 941	2 200
Other Asia	*1 053*	*1 108*	*1 102*	*1 151*
Oceania	**258**	**272**	**275**	**280**

* Estimate
** Forecast

distribution of high yielding and disease resistant planting material, extension of 'good agricultural practices', as well as measures to strengthen the value chain, notably food processing into value-added cassava products. However, ongoing long-term programmes for the commercialization of cassava as a food crop constitute the major factor behind Africa's positive prospects. At the country level, **Nigeria**, the world's leading producer, could produce 45 million tonnes, up 5 percent from 2008, while **Ghana** is expected to reach an output of 10 million tonnes for the first time since 2003. Investment in the sector could yield strong gains in **Malawi** and **Mozambique**. Foreign investment is also set to play a role in boosting production in the region. For instance, China is reported to have provided substantial financial support to the cassava sector in **Angola**, a new entrant to its existing investment portfolio in the region. However, drought conditions prevailing throughout much of 2009 are likely to have led to output contractions in **Madagascar** alongside several important cassava producing countries in East Africa, such as **Kenya, Uganda** and the **United Republic of Tanzania.**

Cassava production is anticipated to record strong growth in **Asia**, much on account of **Thailand**, where, according to officials, a 20 percent rise in production is foreseen in 2009, exceeding 30 million tonnes for the first time. The international market for Thai cassava products has traditionally been the main growth driver for the country's crop, but concerns over subdued demand abroad prompted the Government to intercede heavily in the sector, through reinstating its usual price insurance and intervention purchase scheme, as well as granting preferential credit to farmers. However, the fiscal strain of supporting the agricultural sector has led the Government to launch in November an 'agricultural options programme', in place of the price pledging or insurance scheme. The programme seeks to remove some of the distortionary effects of price supports and will encourage quality over quantity. It will also minimize a longstanding problem of cross-border subsidization of agricultural production, whereby roots from neighbouring countries have been able to benefit from minimum prices. Against the backdrop of falling domestic root prices during the planting period, these incentives (or at least the expectations of continued strong support) were largely behind the record cassava area in 2009, but expectations of robust demand for the crop as a feedstock for ethanol in domestic and neighbouring distilleries have also played a role.

Indeed, biofuel initiatives and policy support, including subsidies and mandatory ethanol-gasoline blending requirements throughout the region have benefited from the allocation of additional land for cassava. Over the past few years, **China** has initiated large-scale investments within and outside of its borders to expand cassava output for ethanol production. Renewed food security concerns have compelled the Government to extend the moratorium on new grain-based ethanol plants. This has led to roughly over half of China's fuel ethanol and alcohol output now being derived from root crops in the form of cassava and sweet potatoes. Expectations now point to a record for China's cassava output of some 8.7 million tonnes this year.

While promising ethanol prospects are behind record cassava crops in **Indonesia** and **Viet Nam,** (the region's other principal producing countries), falling cotton and coffee returns in those countries have also prompted more farmers to switch to cassava cultivation. Officials in Viet Nam put the 2009 harvest at around 8.6 million tonnes. In less than one decade, cassava output in the country has

more than quadrupled, reflecting a strategy to gear the sector towards predominantly supplying the international market. However, future progress is likely to be moderated by policy measures to limit the cassava area to no more than 400 000 ha. In the **Philippines**, public-private sector efforts to develop competitive domestic animal feed and ethanol industries through the commercialization of cassava could pave the way for a record cassava output of well over 2 million tonnes. The country has earmarked a doubling of the cassava area by 2014 from current levels. Smaller cassava producing countries in the region, such as **Cambodia** and the **Lao People's Democratic Republic** have also attracted foreign direct investment from mainland China and the Republic of Korea to expand their cassava energy feedstock and starch production, through land lease initiatives and capital outlays towards processing. This initiative contributed to a surge in cassava plantings in Cambodia in 2008 by around 60 percent giving rise to an official production record of 3.6 million tonnes. Prospects for 2009, however, have been marred by adverse weather conditions, which could see production fall by 10 percent.

The 2009 production outlook for **Latin America and the Caribbean** points to a marginal contraction reflecting an anticipated decrease in the harvested area in **Brazil**, the region's largest producer. Producer prices trended sharply downwards at the beginning of the year, and while they have rebounded strongly in the past five months, the recovery was too late to affect planting decisions. As for **Colombia** and **Paraguay**, the region's other major cassava producing countries, little is known about the current situation, but both countries have experienced firm growth in cassava production in recent years.

Production outlook for 2010

Prospects for global production in 2010 appear somewhat mixed. On the one hand, more attractive prices of competing crops, especially sugar cane, could slow the expansion in global cassava production. For instance, Thailand's recent annual planting survey for the 2010 season points to an expected 7 percent fall in cassava area. But, on the other hand, ongoing public and private support in the scaling-up of cassava crops to meet the needs of the food, energy and industrial sectors could provide an impetus for continued growth.

Table 9. World exports of cassava (product weight equivalent)

Total	2006	2007	2008	2009
	000 tonnes			
Flour and starch	**4 852**	**4 686**	**4 265**	**4 652**
Thailand	4 616	4 416	3 963	4 316
Others	236	269	302	335
Chips and pellets	**5 629**	**6 506**	**5 187**	**7 802**
Viet Nam	1 041	1 317	2 000	4 000
Thailand	4 348	4 824	2 848	3 450
Indonesia	132	210	170	160
Others	108	156	169	191

TRADE

Global cassava trade set to recover in 2009, but increasingly confined to regional and cross-border transactions

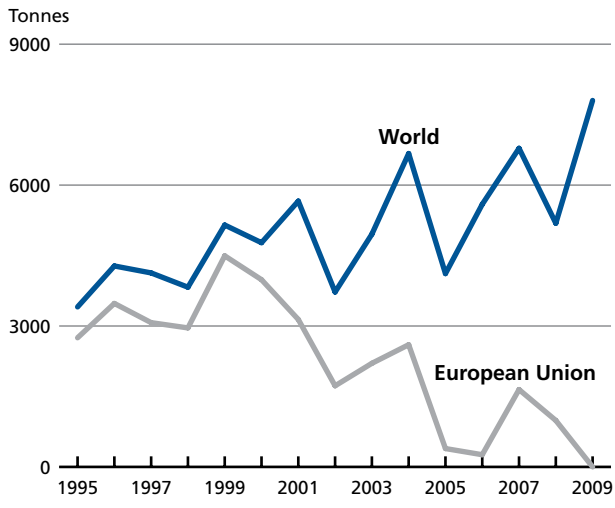
After experiencing a near 15 percent contraction in 2008, world trade in cassava products in the current year is expected to rise by 32 percent to a record 12.5 million tonnes (chip and pellet weight equivalent).

This forecast is based on the improved competitiveness of cassava starch relative to grain based products, combined with soaring international demand for cassava as a feedstock for ethanol production, which have resulted in a stronger pace of cassava shipments to date by Thailand, by far the world's largest international supplier. Overall, the country is anticipated to ship around 7.8 million tonnes of cassava chips, pellets and starch in 2009, up by 14 percent in volume from the previous year. But the arrival of Viet Nam on the arena to fulfil rising industrial requirements in Southeast Asia represents the main reason behind the prospect of record trade in the year. China (mainland) looks set to consolidate its position as the most important buyer on the global stage, accounting for over 70 percent of all inflows in 2009.

Table 10. Thai trade in cassava

	2005	2006	2007	2008	2009
		000 tonnes			
Total	**6 240**	**8964**	**9 240**	**6 810**	**7 766**
Flour and starch total	**3 212**	**4 616**	**4 416**	**3 963**	**4 316**
Japan	622	694	729	873	725
China	525	723	694	611	1 125
Chinese prov. of Taiwan	502	676	548	483	620
Indonesia	348	968	667	417	270
Malaysia	229	312	256	296	400
Others	986	1 244	1 523	1 284	1 176
Chips and pellets	**3 028**	**4 348**	**4 824**	**2 848**	**3 450**
China	2 766	3 963	3 168	1 214	3 000
Republic of Korea	265	268	20	474	111
European Union	246	341	1 436	989	20
Others	-249	-224	200	170	319

Figure 27. World and EU trade in cassava chips and pellets



The composition of cassava trade has undergone major changes. Trade in **pellets** (mainly for animal feed), once the bedrock of international cassava demand, has collapsed. In 2009, the share of pellets in the total volume of trade amounted to just over 2 percent, compared with over 84 percent at the beginning of the decade. Asian countries, especially China and the Republic of Korea, have taken over the European Union as the major destination for cassava feed ingredients, and look set to import around 275 000 tonnes in 2009. Concerns about a permanent retreat of the European Union from the import market are resurfacing again. Despite some activity in 2008, the European Union purchased just 17 000 tonnes in 2009 so far and is unlikely to engage in any major purchase in the foreseeable future. Increased availability of cheap feedstuffs in Member States has minimized demand for cassava, to close to disappearance.

Global trade in **chips** is again expected to be centred in Asia, with China established as the world's leading importer, principally to meet capacity of the burgeoning cassava-based ethanol sector. Indeed, demand for chips by the country is set to underpin aggregate cassava trade in 2009 and imports of the feedstock could rise by as much as 50 percent from the previous year, to 7.7 million tonnes. In the past, Thailand has met this demand, but in the current year, Viet Nam is likely to emerge as the chief supplier, with around 4 million tonnes of cassava chip exports, around double the level of last year. As members of the ASEAN community, imports to China from both Thailand and Viet Nam attract zero duty, which, by boosting the competitiveness of cassava, has constituted an important driver for the expansion of the regional market.

As for **cassava starch** and **flour**, world trade is expected to rebound, but not to the same degree foreseen in the global chips market. Thailand is expected to dominate international shipments, with China again anticipated to be the leading starch buyer, reflecting the policy-induced price advantage that cassava based starch has maintained over grain products in that market. The Chinese Province of Taiwan has engaged in significant international purchases during the course of the year, following the liberalization of alternative markets for maize starch.

Trade outlook for 2010

Prospects for trade in 2010 are shrouded with uncertainty. Much will depend on the continued presence of China in the global marketplace, which in turn will rest on the country's policy that has given cassava a competitive edge over grain-based substitutes. Indeed, a continued rise of cassava prices in the world market would alter the price relative and undermine the potential for further trade growth, especially when current indications point to a sustained increase in international grain supplies.

Another factor concerns the degree of capacity utilization and expansion in cassava-based ethanol industries in Asia, especially China, which in turn will depend on the margin of ethanol returns, the competitiveness of other feedstocks and the ethanol price relative to petroleum. In this regard, the surge in global sugar and molasses prices may well prompt Asian countries to rely more on cassava to fulfil ethanol mandates and industrial alcohol demand.

UTILIZATION

Food and ethanol drive cassava utilization in 2009

Regarding **food** utilization, widespread initiatives have been undertaken in many vulnerable countries that target cassava to meet more of the dietary staple needs. This is particularly evident in sub-Saharan Africa, where consumption of cassava (mostly in the form of fresh roots and basic processed products) is on the rise. However, the overall production gain in the region is expected to barely match growth in population, bringing about little change in per caput food availability. Measures to promote domestic cassava flour over imported cereals, either through direct consumption or through blending remain active throughout the world and constitute an important driver for higher cassava food consumption. 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 have also promoted this initiative, especially Nigeria, many have fallen short of enforcement, owing to the limited availability of cassava flour.

The demand for cassava by **ethanol** sectors will again emerge as the most significant driver in the expansion of cassava utilization. A typical production system can produce about 280 litres (222 kg) of 96 percent pure ethanol from one tonne of cassava roots with 30 percent starch content. China is forecast to produce around 5 million tonnes of ethanol from cassava in 2009, requiring around 7 million tonnes of dried cassava. The country has also secured agreements with several neighbouring countries to supply its ethanol industry with the feedstock. In Thailand, an ethanol plant with a capacity to produce up to 0.5 million litres of ethanol per day was due to go on-line in 2008, but, owing to rising costs during that year, construction was suspended. However, the ethanol facility is expected to start production late in 2009. Thailand requires around 2 million litres of ethanol to meet its 10 percent fuel substitution plan. Likewise in Indonesia, cassava is set to be used in 5 percent ethanol mandatory gasoline blends. With soaring prices of competing feedstocks, sugar and molasses, cassava-based ethanol distilleries in both countries are expected to operate at full capacity.

Utilization of cassava as **animal feed**, in the form of dried chips and pellets, is mostly concentrated in Brazil and Colombia in Latin America and the Caribbean, Nigeria in Africa, China and the Republic of Korea in Asia. Little is known how feed usage has faired in the former two regions, but the demand for cassava feed ingredients in Asia has plummeted. Similarly, in Europe, cassava applications in the manufacture of feed ingredients have been virtually non-existent in 2009.

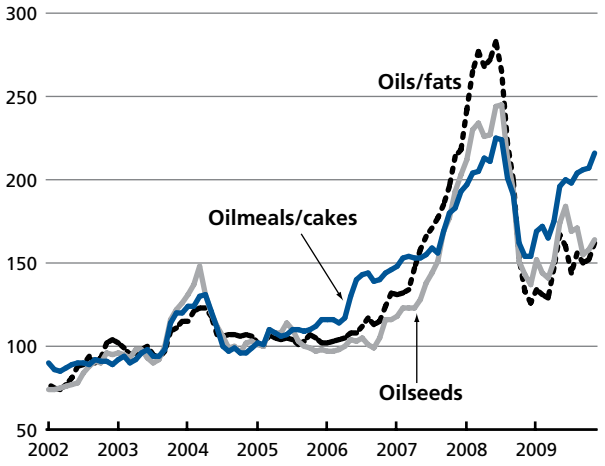
OILSEEDS, OILS AND MEALS[1]

PRICES[2]

First supply and demand forecasts point toward a gradual softening in prices for meals, but not oils

After the 2007/08 surge and subsequent decline, prices for oilcrops and oilcrop products strengthened again during the 2008/09 season (October-September). Throughout 2008/09, the FAO price indices for oilseeds and meals moved above the levels recorded in 2006/07, i.e. the season preceding the extraordinary price surge of 2007/08. The index for oils/fats rose as well, but remained closer to the 2006/07 range. Renewed price firmness in 2008/09 was caused by continued

Figure 28. FAO monthly international price indices for oilseeds, oils/fats and oilmeals/cakes (2002-2004=100)



market tightness: global oilseed production stagnated following the decimation of South America's soybean crop by excessively dry weather, while global oils and meals consumption remained relatively robust in spite of the global economic recession, a development that resulted in record-low stock levels.

For the current season, a gradual easing of the global supply and demand situation is anticipated, in particular regarding meals and cakes. However, during 2009/10, markets are expected to remain vulnerable as, *vis-à-vis* demand, supplies should remain less ample than in past years. Moreover, volatility in world prices could remain high, considering that the anticipated surplus in production will concern a few countries only, and that both, world export and import markets, are increasingly dominated by a limited number of countries.

The market for meals/cakes, where quotations have been historically high since 2007/08, could experience a weakening in prices during 2009/10, provided the current forecast of higher world supplies and a significantly

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

[2] For details on prices and corresponding indices, see appendix TableA24.

Figure 29. CBOT soybean futures for March

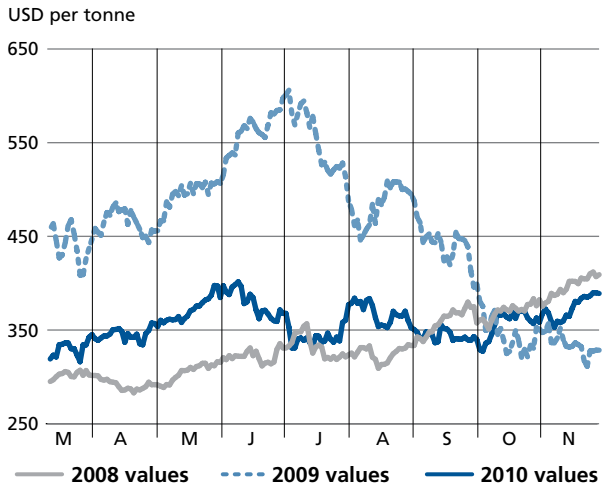


Figure 30. FAO monthly price index for meals/ cakes (2002-2004=100)

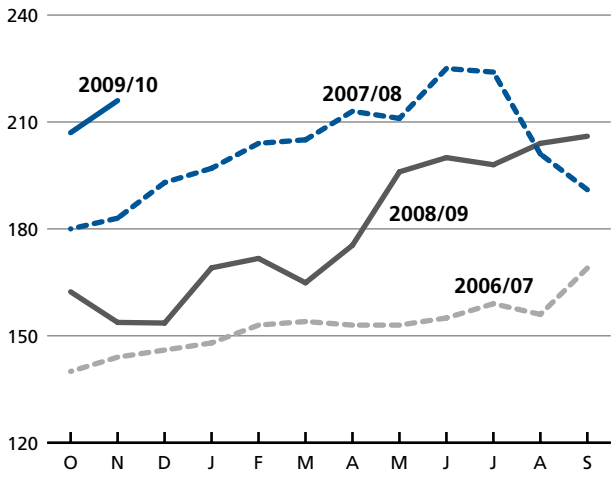


Figure 31. FAO monthly price index for oils/fats (2002-2004=100)

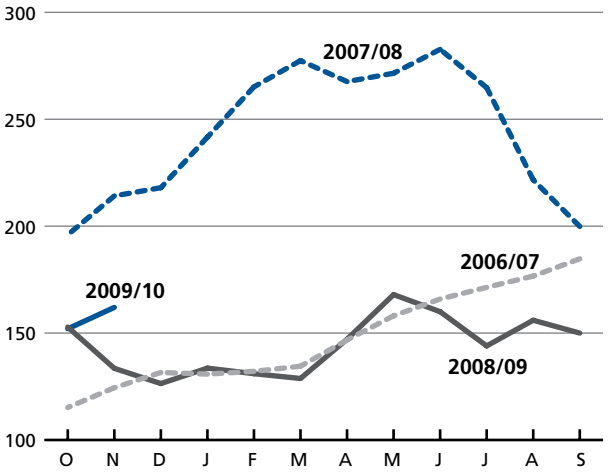
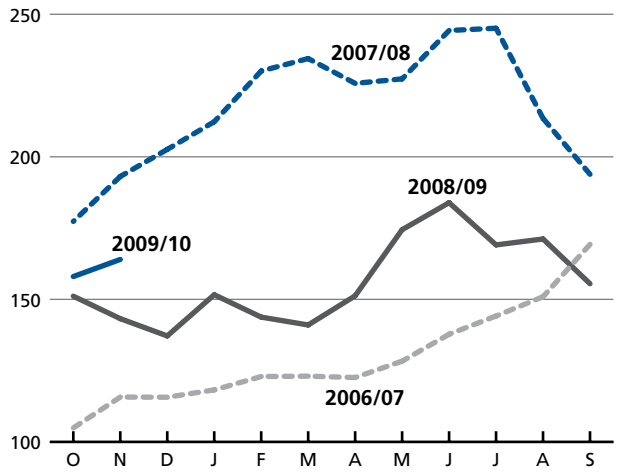


Figure 32. FAO monthly price index for oilseeds (2002-2004=100)



improved global stocks-to-use ratio materializes. However, during the first months of the season, low carry-in stocks should continue to sustain prices, which would only soften towards the second half of the season, when the South American soybean crop becomes available. Overall, the market should be characterized by strong reliance on one particular meal (soybean meal) and a very limited number of suppliers (in particular Argentina), which will make it particularly vulnerable. By contrast, in the market for oils/fats and high oil-yielding oilseeds, a relatively tight supply and demand situation may sustain and possibly strengthen prices as the season advances. Based on current forecasts, those markets are expected to be characterized by a below average stock-to-use ratio, increased dependence on soyoil supplies from South America and renewed growth in demand for vegetable oil-based biodiesel.

As the 2009/10 season has only just started, all price forecasts remain of a tentative nature. Especially, any weather anomalies in South America's soybean growing regions or Southeast Asia's oil palm areas could alter the aforementioned suggested price outlook. Moreover, markets will remain subject to several external factors, notably the course of the global economy and future developments in mineral oil prices and in the United States Dollar exchange rates. Another source of uncertainty lies in possible further changes in national policies concerning biofuels, domestic production support and import/export measures.

OILSEEDS

Global oilseed output anticipated to grow again in 2009/10

After the exceptional drop of 2007/08 and the ensuing stagnation of 2008/09, global oilseed production is poised to resume growth during the 2009/10 season. Rising more than 8 percent from last season, total output is forecast to climb to a new record of 440 million tonnes. This expansion will be almost entirely on account of soybeans, as production of the other main oilseeds is anticipated to either fall or remain unchanged, the opposite of what occurred in the last two seasons, when poor soybean harvests were offset by the other oilcrops.

The global sunflowerseed, groundnut and cottonseed harvests are estimated to fall from last season's level due to unfavourable weather conditions, while world rapeseed output should remain close to last season's record as most producers are reporting good yields. By contrast, global soybean output is expected to rise by an exceptional 17 percent, driven in particular by yield improvements but also by a new record in planted area. The 12 percent expansion currently reported from the **United States** is expected to be followed, early next year, by a rise of almost 30 percent in South America, where extremely dry weather led to a drastic reduction in soybean output last season. The growth of production in the United States reflects some increase in area, along with favourable weather conditions during most of the growing season. In **South America**, where plantings are currently underway, the expectation of better returns for soybeans compared with competing grains, together with a general decrease in production costs is expected to result in a 7 percent rise in total soybean area. Furthermore, a return to average yield levels is projected, assuming that normal climatic conditions will prevail throughout the growing season. However, based on the very latest reports, plantings in Argentina could turn out lower than originally expected due to unfavourable weather conditions in the past few weeks. The region's final crop outturn will be determined by the coming months' weather pattern, including possible El Niño events, as well as access to capital and the further development of input prices and exchange rates. In **India**, soybean plantings are expected to remain low, as producers are wary of continued competition from low-priced imports of vegetable oils, while a drop in production is reported from **China**, where farmers have shifted some land to maize and weather conditions have not been favourable.

Table 11. World production of major oilseeds

	2007/08	2008/09 *estim.*	2009/10 *f'cast*	Change 2009/10 over 2008/09 %
	million tonnes			
Soybeans	220.0	211.5	248.0	17.3
Cottonseed	44.0	40.7	40.2	-1.2
Rapeseed	48.7	58.4	58.3	-0.2
Groundnuts (unshelled)	35.4	35.2	33.0	-6.3
Sunflower seed	28.9	33.9	31.5	-7.1
Palm kernels	11.2	11.5	12.1	5.2
Copra	5.0	5.2	5.3	1.9
Total	**393.2**	**396.4**	**428.4**	**8.1**

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.

OILS AND FATS[3]

Growth in global oil supplies constrained by low carry-in stocks and limited expansion in production

FAO's first 2009/10 crop forecast translates into an increase in global oil/fat production of 5 percent, thus exceeding the growth rate of the three previous seasons. The circumstance that oil/fat production is estimated to grow less than global oilseed output is due to this season's dominant contribution of **soybeans**, a low oil-yielding oilseed. Global **palm oil** production, which was affected by poor yields in 2009, is anticipated to grow by an about average rate of 6 percent, mainly thanks to a further increase in mature area in Indonesia and, barring exceptional El Niño events, a general improvement in yields. It is important to note that a large part of global oil production will only be realized in the second half of the season, i.e. once the southern hemisphere's soybean harvest becomes available. As to **rapeseed oil**, world production is estimated to remain close to last season's record level.

Global supplies of oils/fats (i.e. 2009/10 production plus 2008/09 ending stocks) are anticipated to grow less than global production, reflecting the very low level of inventories at the beginning of the season. Low opening stocks are expected to limit supply growth in particular in **Brazil** and **Malaysia**, whereas an improvement in supplies is anticipated in **Argentina,** the **European Union, Indonesia** the **United States** and the **European Union**.

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

Table 12. World oilseeds and products markets at a glance

	2007/08	2008/09 estim.	2009/10 f'cast	Change 2009/10 over 2008/09
		million tonnes		%
TOTAL OILSEEDS				
Production	403.5	407.1	440.5	8.2
OILS AND FATS[1]				
Production	155.6	159.7	168.0	5.2
Supply[2]	179.8	182.8	190.0	3.9
Utilization[3]	157.5	161.7	167.0	3.3
Trade[4]	80.5	85.1	83.9	-1.4
Stock-to-utilization ratio (%)	*14.6*	*13.6*	*13.7*	
MEALS AND CAKES[5]				
Production	101.5	99.7	111.9	12.2
Supply[2]	123.1	116.9	126.4	8.1
Utilization[3]	104.9	103.8	106.9	3.0
Trade[4]	63.0	61.7	62.4	1.1
Stock-to-utilization ratio (%)	*16.9*	*14.0*	*16.9*	

FAO price indices (Oct-Sep) (2002-2004=100)	2006/07	2007/08	2008/09	Change: 2008/09 over 2007/08 %
Oilseeds	129	217	156	-28
Oilmeals/cakes	153	202	180	-11
Oils/fats	148	243	144	-41

Note: Refer to footnote 1 in the text for further explanations regarding definitions and coverages

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

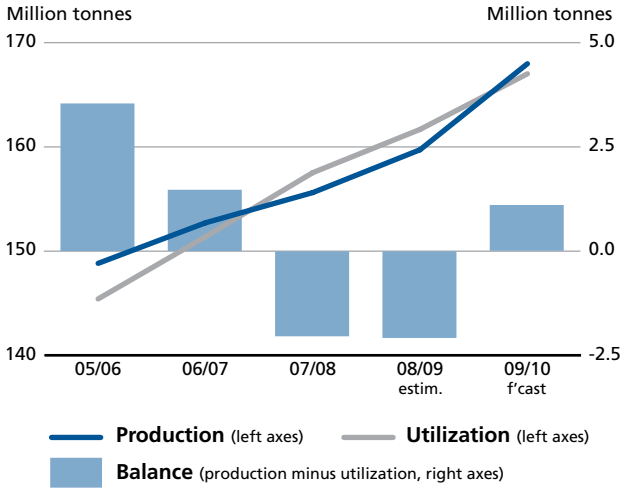
[2] Production plus opening stocks

[3] Residual of the balance

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

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

Figure 33. Global production and utilization of oils/fats



Oils/fats consumption to expand further, also thanks to rising biodiesel demand

In the last years, global consumption of oils/fats continued to increase in spite of the 2007/08 price peak and the ensuing global economic recession. During 2009/10, world consumption is anticipated to increase further (by over 3 percent), mainly driven by additional increases in consumption for food purposes in China, India and other emerging economies in Asia. Furthermore, demand from the biodiesel industry is expected to accelerate after last season's slow-down: margins in vegetable oil-based biodiesel production should improve this season, given stronger petroleum prices and the continued weakness of the United States Dollar; moreover, during 2010, national regulations requiring higher domestic biofuel blending rates are expected to come into force in several countries in the **European Union, Southern America** as well as in other regions, while biodiesel production for the export market is also likely to grow. Overall, consumption growth is expected to concentrate in **China**, **South/Southeast Asia**, **North America**, **Argentina, Brazil** and the **European Union**. Mainland China is anticipated to become the world's leading oils and fats consumer ahead of the European Union, and India should confirm its position as third largest user ahead of the United States. In the European Union, non-food uses (primarily for biodiesel) are expected to rise faster than food uses, and as much as 65-70 percent of domestic rapeseed oil production may be absorbed by the biodiesel industry. However, a lower rate of absorption could materialize in case straight biodiesel imports from Argentina and the United States were to rise. In Argentina and Brazil, domestic consumption is expected to climb to record levels, while in North America, consumption should recover from the drop experienced in the last two seasons.

The anticipated rise in global oils/fats demand should be satisfied primarily by palm oil, followed by rapeseed and soybean oil. Demand for palm oil for edible purposes continues to be sustained by its price discount *vis-à-vis* other oils, whereas rape and soyoil are expected to benefit from rising demand for diesel feedstock.

Small excess of production over demand to allow modest recovery in world oils/fats inventories

While in the last two seasons global oil/fat production fell short of demand thereby leading to marked drops in global inventories, in 2009/10, production is anticipated to exceed demand, albeit by a small margin of about 1 million

Figure 34. World closing stocks and stock-to-use ratio of oils/fats (including the oil contained in seeds stored)

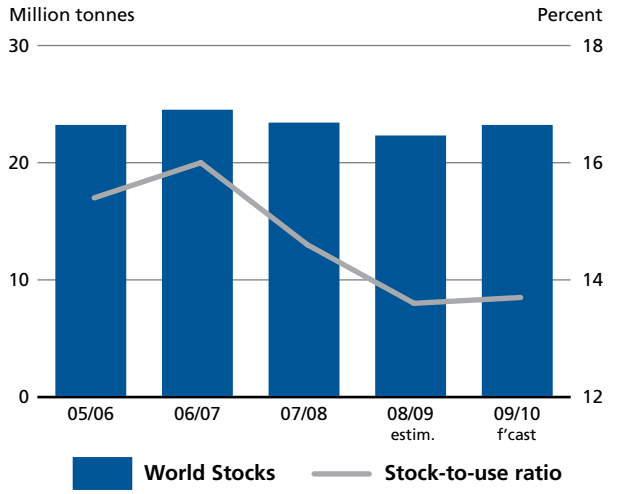


Figure 35. Total oil/fat imports by region or major country (including the oil contained in seed imports)

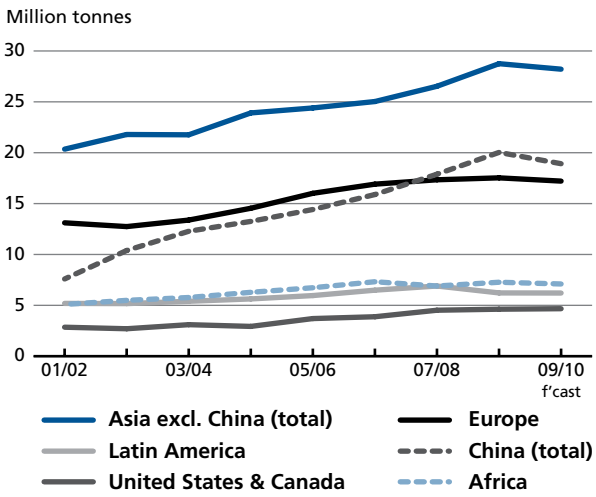
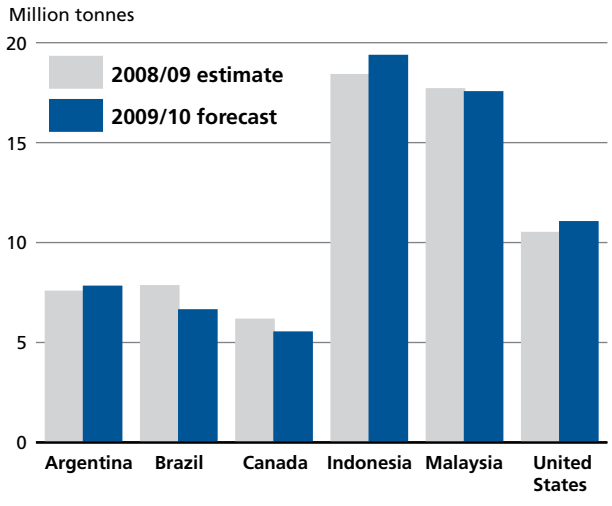


Figure 36. Oil/fat exports by major exporters (including the oil contained in seed exports)



tonnes or less than one percent. As a result, a first, modest recovery in stocks should be possible: global inventories are anticipated to grow by 4 percent, reaching almost 23 million tonnes (measured as oil/fat inventories *per se*, plus the oil contained in stored oilseeds), which, however, would remain below the level recorded in 2006/07, the last season with ample supplies. The anticipated rise in inventories concerns primarily **soybean oil**. **Palm oil** stocks should grow only marginally, whereas **rape** und **sunflower oil** inventories may fall. As the anticipated 1 million tonnes rise in global stocks compares with an estimated 5 million tonnes increase in global utilization, an only marginal improvement is expected in the stocks-to-use ratio, thus suggesting continued tightness in the global oils/fats market and possible firmness in world prices for oils/fats as well as high oil-yielding oilcrops.

Slight reduction anticipated in global oils/fats trade

A small, unusual fall in global oils/fats trade (which comprises the oil contained in traded oilseeds) is expected in 2009/10. Compared with an average growth of 6 percent during the past five seasons, global trade is estimated to decrease by more than one percent or over 1 million tonnes. Nevertheless, the expected trade volume would be the second highest on record. Falling trade volumes of **rape** and **sunflower oil** and unchanged **soyoil** trade should be partly compensated by rising shipments of **palm oil**, which thereby confirms its leading position.

The rise in palm oil export availabilities will be entirely on account of **Indonesia**, with shipments anticipated to surpass, for the first time, those of **Malaysia**. Exports of soyoil (including the oil equivalent of soybeans traded) should remain unchanged as the three main suppliers, **Argentina, Brazil** and the **United States**, are expected to use much of their domestic production rises for national consumption and stock replenishment.

On the import side, purchases by the three main buyers, **China**, the **European Union** and **India** (which together account for half of global imports) are anticipated to fall by, respectively, 6, 3 and 10 percent, owing to improvements in domestic oilcrop production and relatively ample stock positions. Conversely, the degree of import dependence in these countries is expected to weaken in 2009/10. By contrast, foreign purchases by other countries in **Asia**, which

typically do not have a strong domestic oilcrop sector, are expected to increase further, mirroring anticipated rises in oils/fats consumption.

MEALS AND CAKES[4]

World meals/cakes supplies to fully recover from recent falls

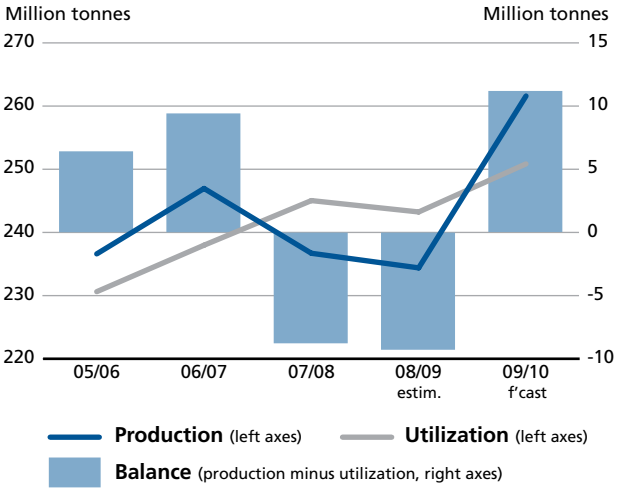
The anticipated expansion in global oilseed production, which concerns primarily high meal-yielding soybean, should lead to a major rise (12 percent) in global meal/cake production in 2009/10. Estimated at around 112 million tonnes (in protein equivalent), global output is poised to climb to a new record, offsetting the exceptional decline experienced in the last two seasons. **Soymeal** output is estimated to expand by no less than 18 percent, while **rape meal** production is expected to remain unchanged and sunflower, **cottonseed** and **groundnut meal** output should fall. Most of the overall growth is expected to take place in South America, whose share in world production should return to 38 percent (following last season's drop to 33 percent).

Also global supplies of meals/cakes (i.e. 2009/10 production, plus 2008/09 closing stocks) are anticipated to recover from the previous drops and should set a new record. As in the case of oils and fats, due to last season's record-low meal inventories, the year-on-year rise in meal supplies should remain below that expected for production. The projected growth in global supplies is expected to stem mainly from **Argentina**, the **European Union** and the **United States** (due to good harvests) as well as **China** (thanks to ample inventories). By contrast, in **Brazil**, domestic availability could fall in spite of the likely record meal output, given the influence of last season's record-low ending stocks.

Global meal consumption to resume growing, largely driven by rising demand for meat in developing countries

World consumption of meals/cakes has been characterized by falling growth rates in the last four seasons. During 2008/09, consumption has even fallen as the economic recession lowered demand for livestock products. For 2009/10, global meal utilization is anticipated to resume growing, as meat demand and profitability in the livestock sector are expected to improve, particularly in Asia. However, year-on-year growth should not exceed 3 percent, as the rebuilding of livestock herds will require time and because meal prices are likely to remain relatively firm during the first half of the season. Consumption growth should again be concentrated in **developing countries**, especially among emerging economies. The strongest expansion is expected in **China** as well as other parts of **Asia**, due to steady population growth, further shifts in dietary habits and the region's dynamic livestock sector. Among developed countries, in the **European Union** meal consumption should rise moderately thanks to ample domestic supplies, whereas in the **United States**, consumption could remain depressed due to sustained competition from attractively priced Dried Distiller Grains (DDG), continued low profitability in livestock production as well as the need to replenish stocks.

Figure 37. Global production and utilization of meals/cakes

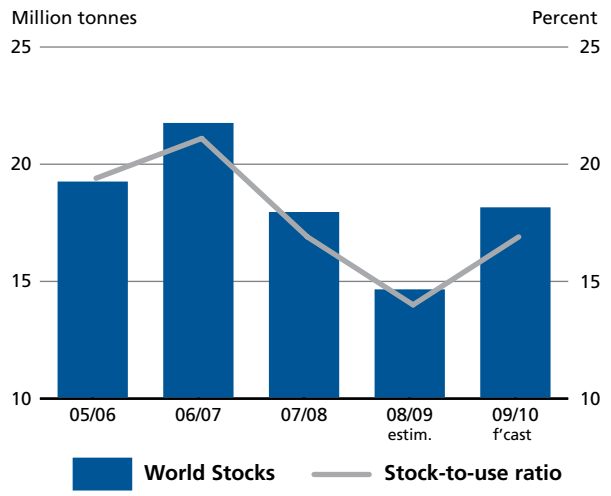


Sizeable production surplus to allow marked recovery in global meal stocks

After falling well short of demand during the last two seasons, in 2009/10, global meal production is forecast to exceed consumption by a comfortable margin of almost 5 percent or 5 million tonnes (expressed in protein equivalent). Such production surplus is expected to result in a 24 percent rise in global meal inventories, compared with marked drops (around 18 percent) in the past two seasons. The recovery in global meal stocks (which in addition to meal/cake inventories *per se* include the meal contained in stored oilseeds) will concern primarily soybeans, while inventories of other meals may fall slightly. The replenishment of inventories is expected to occur in particular in **Argentina**, **Brazil** and the **United States**.

[4] This section refers to meals from all origins, which, in addition to products derived from the oil crops discussed under the section on oilseeds, include fishmeal as well as meals of animal origin.

Figure 38. World closing stocks and stock-to-use ratio of meals/cakes (in protein equivalent and including the meal contained in seeds stored)



China's stocks are anticipated to remain close to last season's record level as new government emphasis on public stockholding persists.

Given that the anticipated, marked rise in inventories compares with a relatively moderate expansion in global meal demand, the global stocks-to-use ratio is anticipated to recover from last season's historic low, thus suggesting a possible easing of the global meal market and possibly, a weakening in international prices for meal and high meal-yielding oilcrops, notably soybeans, the prices of which have been historically high since 2007/08.

World trade in meals/cakes to stall due, *inter alia*, to exporters' need to replenish stocks

After last season's unusual contraction, world trade in meals/cakes is expected to grow by a modest one percent in 2009/10. At 62.4 million tonnes (expressed in protein equivalent and including the meal contained in traded oilseeds), global trade would remain below the level attained in 2007/08, thus prolonging the growth break. As to individual meals, most of the growth anticipated in **soymeal** trade is likely to be offset by reduced shipments of **rapeseed** and **sunflower meal**, following poor crops and thus export availabilities in Canada (rapeseed), the Russian Federation (sunflower) and the Ukraine (rape and sunflower).

Regarding soybean meal (global trade of which recorded an unusual drop last season), higher shipments are expected from **Argentina**, **India, Paraguay** and the **United States**, owing to record or near-record harvests. However, the urgent need to also replenish domestic stocks tends to curb the increase in export availabilities in these countries. For the same reason, coupled with the prospect of rising domestic consumption, shipments from **Brazil** are even expected to shrink in 2009/10. It is important to note that, during the first half of the current season, export availabilities will remain limited because, until soybeans are harvested in the Southern hemisphere, the United States will be the only major supplier. Abundant supplies should be available during the second half of the season, provided the anticipated rise in South American soybean production materializes.

Figure 39. Total meal/cake imports by region or major country (including the meal contained in seed imports)

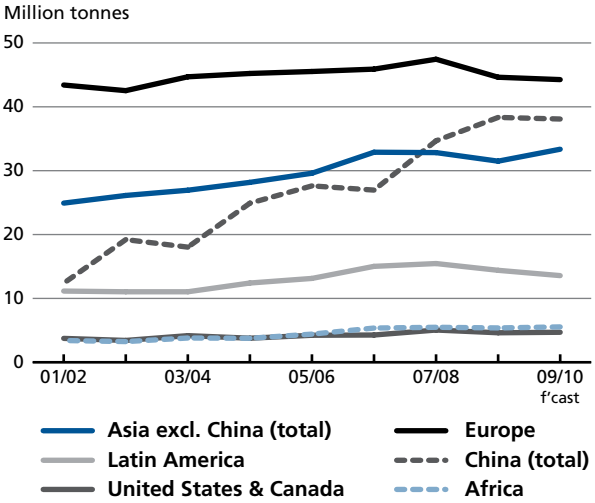
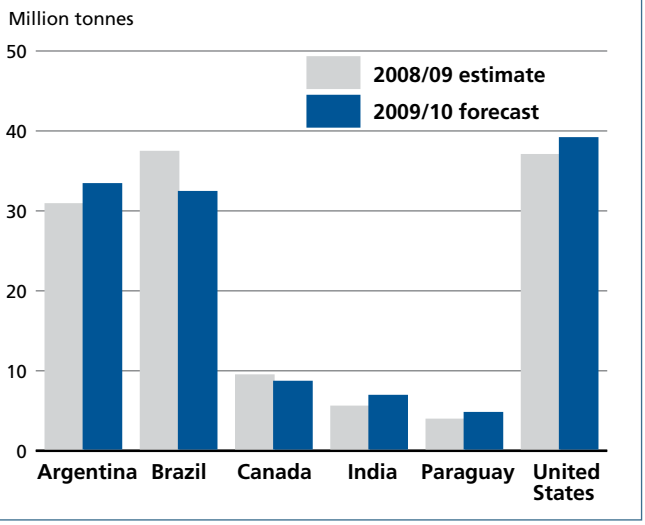
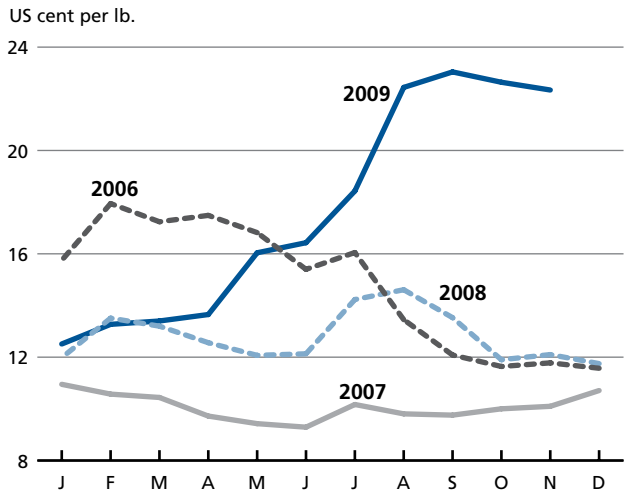


Figure 40. Meal/cake exports by major exporters (including the meal contained in seed exports)



With regard to imports, **Asia**'s aggregate purchases, which grew by over 50 percent over the last five seasons and today account for half of the global market, are poised to rise further, assuming renewed growth in the region's livestock industries. **China**'s imports (primarily in the form of whole soybeans) are anticipated to remain around last season's record level, also owing to the country's huge crushing capacity and to domestic policies in favour of local producers, which tend to push domestic prices above import prices. Imports by the **European Union** the other big importing region, are expected to fall for the second consecutive season, thanks to ample carry-in stocks and a record rapeseed crop, which should keep the European Union's share in global imports below 30 percent.

Figure 41. International Sugar Agreement (ISA)



SUGAR

PRICES

Sugar prices sharply up, as the market overreacts to negative production prospects in Brazil and to expectations of surging imports by India

International Sugar Agreement daily prices have risen sharply since late last year, passing from an average of US 11.90 cents per pound in October 2008 to US 16.00 cents per pound in May 2009 and reaching a 28-year high of US 25.18 cents per pound[5] on 31 August 2009. Since then prices have started retreating and, in October, they averaged US 22.00 cents per pound. While a gradual increase in prices in 2009 was to be expected, given the tightening of the global market, the speed and magnitude of the run-up suggest an overreaction of the market to an expected surge of imports by India and to a poor outlook of crops in Brazil in 2009/10. As production prospects started to improve in October, notably for Brazil, international sugar price began to retreat from their highs.

Overall, despite production cuts in 2008/09 and expectations of world sugar production remaining short of global consumption in 2009/10 for the second consecutive year, the sugar market is relatively well supplied. Carry-over stocks in 2008/09 were estimated at 72 million tonnes, equivalent to 45 percent of estimated global utilization, while those in 2009/10 are forecast at 68 million tonnes, still providing a comfortable 42 percent coverage of expected world consumption in 2009/10. Indeed, world sugar utilization is gauged to have grown by 1.6 percent in 2008/09 to 161 million tonnes and is foreseen to expand by a modest 1.1 percent in 2009/10 to 163 million tonnes, below the long-term average trend. Looking ahead, world sugar prices are expected to remain firm but at a lower level than current highs.

Who is affected by current high international sugar prices?

Sugar markets are highly regulated by domestic and trade policies and are often subject to prohibitively high tariffs and limited tariff rate quotas that insulate them from international price developments. For example, in **Japan** and the **United States**, the sugar subsector is relatively unaffected by international price movements as domestic prices are much higher than world levels. This is also the case in the **European Union**, even though domestic sugar prices have been on a declining trend since 2006, when a major reform of the sugar market was implemented. In several developing countries, and especially the least developed countries, the predominance of informal trade, which is generally not integrated with international markets, reduces the transmission of high world prices on consumers and producers. However, sugar prices have also increased sharply in key importing countries in Asia and Africa. For example, domestic sugar prices have reportedly increased by 30 percent in China and India since February 2009. On the other hand, high international prices provide an opportunity to boost exports and generate foreign exchange earnings in **Brazil**, **Thailand** and a few net-exporting countries in eastern and southern Africa.

[5] USD 551 per tonne

Table 13. World **sugar market at a glance**

	2007/08	2008/09 estim.	2009/10 f'cast	Change: 2009/10 over 2008/09
	million tonnes			%
WORLD BALANCE				
Production	167.6	154.7	159.7	3.3
Trade	47.3	49.2	52.1	5.9
Utilization	158.4	160.9	162.6	1.1
Ending stocks	79.9	72.4	68.4	-5.6
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	22.7	23.0	22.9	-0.1
LIFDC (Kg/year)	13.2	13.4	13.4	-0.1
World stock-to-use ratio (%)	**50.4**	**45.0**	**42.1**	
ISA Daily Price Average (US cents/lb)	**2007**	**2008**	**2009***	**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	10.08	12.80	17.66*	37

* Jan-November 2009

PRODUCTION[6]

World sugar production to recover somewhat in 2009/10

According to the latest FAO forecasts, after falling in 2008/09, world sugar production is expected to recover by 3.3 percent to 159.6 million tonnes in 2009/10. The growth in production is attributed to generally favourable weather conditions and higher prices, which should encourage the use of fertilizers and other inputs. The bulk of the expansion is expected to take place in the developing countries, where production is forecast to grow by 3.7 percent, as opposed to 1.8 percent in the developed countries. Despite a larger world production, this will not be enough to cover the expected global consumption in 2009/10, marking the second consecutive year of a shortfall. The deficit between production and consumption is predicted to hover around 3 million tonnes.

In ***South America***, production is forecast to change little, overall. Although the outlook in **Brazil** has deteriorated recently as a result of heavy rainfall during late summer, which damaged sugar-cane yields and delayed harvesting operations, output is now estimated to remain at last year's level of around 38 million tonnes. Given the relative competitiveness of sugar prices against ethanol returns, it is expected that a larger share of around 43 percent of sugar cane output will be allocated for the processing of sugar instead of ethanol, as opposed to 40 percent in 2008/09. Sugar production is expected to rise in **Argentina**, reflecting a return to favourable weather conditions and large investments in productive capacity. Increased output is expected in **Peru**, as large private investment entered the sector to cater for domestic consumption and exports. Sugar output in **Colombia** should also increase on the back of rising planted areas, as buoyant domestic sugar prices should also favour the transformation into sugar over sugarcane-based ethanol.

In Central America, the sector may undergo a vigorous recovery in 2009/10. Improvements in domestic sugar prices boosted sugar production in **Mexico** to 5.7 million tonnes, up 10 percent from a reduced output in 2008/09. Last year's decline in production was attributed to difficult growing conditions and delays in cane processing. Sugar supply in 2009/10 should be enough to cover expected domestic consumption and larger exports to the United States, which are being propelled under the North America free trade agreement. Despite less than ideal weather conditions, mainly excessive rainfall, sugar output is to expand in **Guatemala.** Planted area in the country should be responsive to competitively administered sugar-cane prices by the Guatemala's Sugar Board. Reflecting an anticipated expansion in sugar-cane plantings and more widespread use of inputs, sugar output in **Cuba** is officially forecast to increase to 1.5 million tonnes in 2009/10, which, if realized, would be 300 000 tonnes more than in 2008/09. This estimate might need to be revised downward in the course of the season to reflect possible losses incurred during the hurricane season.

Table 14. World **sugar production**

	2008/09	2009/10
	million tonnes	
Asia	51.6	54.6
Africa	10.8	11.2
Central America	11.8	12.6
South America	46.3	46.4
North America	7.1	7.6
Europe	22.3	22.3
Oceania	4.9	5.0
World	**154.7**	**159.7**
Developing countries	117.3	121.5
Developed countries	37.4	38.0

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

Notwithstanding drought conditions in several sugar producing countries, aggregate sugar production in **Africa** is set to reach 11.2 million tonnes in 2009/10, 400 000 tonnes or 3.5 percent above the previous year. The increase in output is largely due to area expansion and enhanced processing capacity. Strong domestic consumption growth and improved access to the European Union market under the Everything-But-Arms initiative (EBA) and the Economic Partnership Agreements (EPAs) are fostering large investment efforts in the continent. In **South Africa**, the largest sugar producer in the region, sugar production is forecast at 2.4 million tonnes in 2009/10, up 3.4 percent from 2008/09, on account of improved crop husbandry, which should sustain yields. Sugar production in **Egypt**, the second largest sugar producer in Africa, is expected to stay at last year's level (1.9 million tonnes) as many farmers are expected to shift to growing cereals, which offer better returns than sugar. However, sugar production may be boosted over the next three years by government support through large investments and increased sugar-cane prices to farmers. Production in **Sudan** is forecast to increase to 1.1 million tonnes, which is 21 percent more than 2008/09, given a significant expansion in processing capacity. There are plans to expand production to 10 million tonnes by 2015, with foreign direct investments from Gulf States and joint partnership initiatives with Egypt. Expected gains are also foreseen in **Kenya**, where production is set to grow by about 4 percent due to near normal rainfall in the western part of the country, where most of the sugar-cane farming takes place. These increases are set to offset declining production in the costal provinces where insufficient rainfall has impeded crop growth. In **Mozambique**, sugar output is expected to reach 400 000 tonnes, up 24 percent from last season, as planted area is foreseen to expand by 37 percent in 2009/10. The incremental output will be processed by new processing infrastructure undertaken by the four sugar mills in the country. Below-average rainfall and limited input utilization, due to high fertilizer costs, are set to constrain production growth in the **United Republic of Tanzania** below initial forecasts. The sugar subsector in that country is undergoing structural changes in response to improved market access to the European Union.

The 2009/10 outlook for sugar production in *Asia* has improved from last year's season, when significant cuts in **India** and **Pakistan** reduced aggregate output in the region by 22 percent from the levels attained in 2007/08. The reduction was attributed to irregular rainfall and a shift of land allocation in favour of grains and oilseeds. Sugar output in India is now expected to reach 17.5 million tonnes, 11 percent more than last year, but below initial forecasts, as prospects were marred by poor monsoon rains during the critical months of June and July. Despite a drop in planted area in the major sugar-cane producing region of Utar Pradesh, production may benefit from the higher statutory minimum price (SMP) paid to growers, which is expected to result in a greater allocation of cane into centrifugal sugar production, at the expense of local non-centrifugal sweeteners namely *gur* and *khandsary*. Still, production is anticipated to fall short of expected consumption for the second consecutive year. In **Thailand**, early official estimates of production in 2009/10 point to 6 percent growth, driven by favourable weather conditions and higher usage of fertilizers. Given current attractive prices, production may increase further in the following season due to larger area

Figure 42. Sugar production by major producing countries

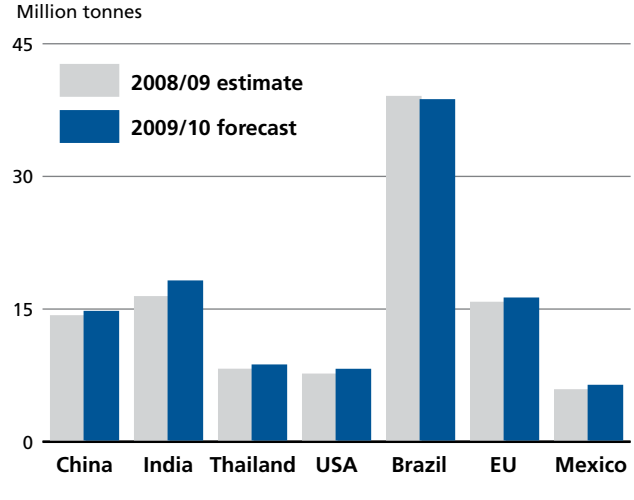
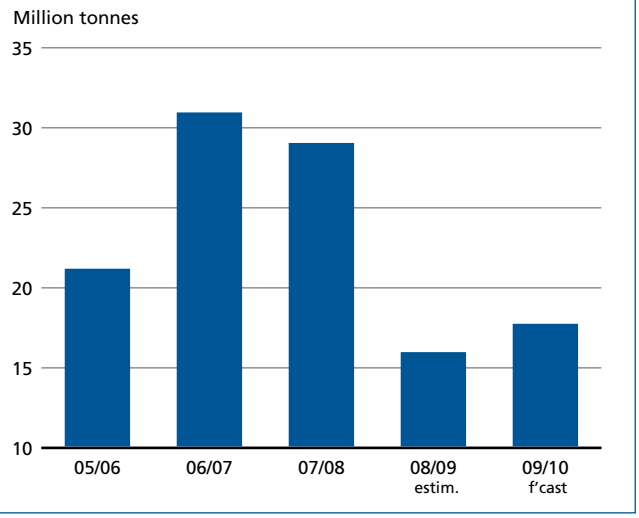


Figure 43. Sugar production in India



under sugar cane. Moderate gains are expected in **China**, mainly as a result of higher yields that have offset declines in planted areas for both beet and cane sugar, as well as in **Indonesia** and **Turkey**. However, production in **Pakistan** is set to decrease on the back of a decline in area planted and more remunerative prices for short duration crops.

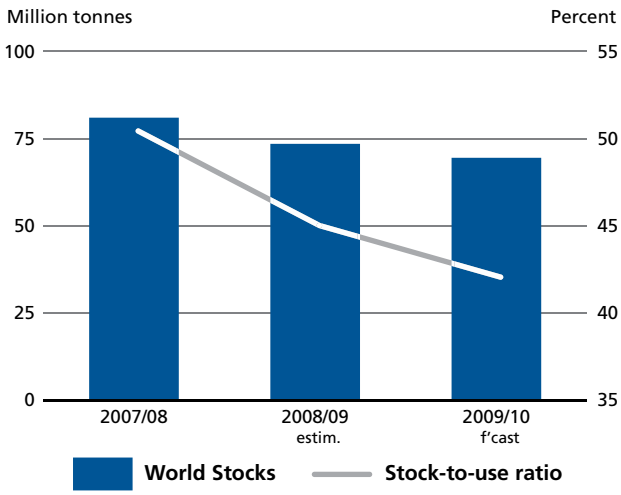
In ***Europe***, sugar output in the **European Union** is expected to expand to 15.6 million tonnes, still well short of the 17.4 million tonnes produced in 2007/08. Favourable weather conditions are likely to result in output surpassing the established quota of 14.5 million tonnes. Similar to last year, the out-of-quota quantities will be absorbed by the chemical and ethanol industries. Sugar output is also expected to increase in **Ukraine** because of higher sugar content, even though farmers cut area sown to beet and planting instead more grains and sunflower seeds. Production is set to decline in the **Russian Federation** by 4 percent, as a result of a sharp drop in the area under beet and below average yields. The Government is reportedly planning to provide USD 500 million in subsidies to boost sugar production by 42 percent over the next three years. In the ***rest of the world***, sugar production in the **United States** is forecast above the 2008/09 level, on account of increased area and use of Genetically Modified Organisms (GMO) seeds. In **Australia** flooding in Queensland, the main producing region, has impaired cane yields and sugar content, wiping early prospects for a larger sugar output. Production in 2009/10 is now expected to remain around the same level as in 2008/09.

UTILIZATION

World sugar consumption to grow below trend in 2009/10

World sugar consumption in 2009/10 is forecast to rise to 162.6 million tonnes, 1.1 percent more than in 2008/09, but 1.4 percentage points below the ten-year trend as relatively high sugar prices are expected to contain consumption growth. Sugar intake in the developing countries is set to expand only moderately to 113 million tonnes, accounting for 69 percent of global consumption. Policy measures to dampen the effect of current high prices, such as temporarily removal of tax or import duties, limits on stock holdings and retail price control, have helped sustain sugar intake in several net-importing developing countries. On average, per caput sugar availability in 2009/10 is estimated to remain around 23 kg per year, the same level as in the previous season. A return of positive economic growth in 2010 together with an easing of international sugar prices should lend some support to industrial sugar usage by the manufacturing and food preparation sectors, including the beverages industries, which is especially sensitive to variations in income.

Figure 44. Sugar closing stocks and stock-to-use ratio



TRADE

World trade to increase driven by import demand

World sugar **imports** are forecast to reach 52 million tonnes in 2009/10 (October/September), 5 percent more than in the previous season, driven largely by the need to replenish stocks or/and offset production shortfalls. India will be the major engine for growth in world sugar imports in 2009/10. However, forecasts at this early stage of the season are subject to much uncertainty. For instance, an unexpected easing of world sugar prices or a further depreciation of the United States Dollar against other major currencies could lead to a stronger import demand. Shipments to the **European Union** are also set to increase, to meet growing domestic utilization. Official imports are estimated to reach 4.5 million tonnes, 12.5 percent, more than last year. Some of these imports will be sourced from the EBA countries, which, as of October 2009, have been granted unlimited and duty-free access to the European Union market. Elsewhere in *Europe,* imports by the **Russian Federation**, the third largest sugar importer in 2008/09, are expected to increase by 500 000 tonnes to 3.3 million tonnes, to compensate for lower production. Imports by the country in 2008/09 have been less than in the previous year, owing to an exceptionally high seasonal import duty of USD 165 per tonne, which the Government is

now reportedly considering to reduce, in view of the high prices prevailing in world markets. In Asia, purchases by Indonesia and Malaysia, are foreseen to decrease, mainly on account of either higher international sugar prices or better production. Preliminary forecasts indicate that China may purchase about 200 000 tonnes less than last season, as production in the country continues to expand. In the rest of the world, deliveries to the United States are forecast at 2.5 million tonnes, a 9 percent decline over the previous year. Additional imports may be required in the course of the season to rebuild reserves, as the United States' current stock level is relatively low. Similarly, imports by countries in Africa are foreseen to decline by around 2.3 percent to 9 million tonnes, much lower than previously envisaged, as larger availability of locally produced sugar could deter imports.

Much of the anticipated rise in global exports in 2009/10 would be on account of Brazil, the world's largest exporter, which is expected to ship 25 million tonnes, up 5 percent from 2008/09, despite lower than expected production. Comfortable stock levels are indeed expected to enable the country to meet the increase in import demand. Brazil will account for nearly half of the global export this season and should be among those to benefit most from the higher prices. Owing to better production prospects and strong import demand by India, sales from Thailand, the world's second largest sugar exporter, are also expected to increase by 3.5 percent to 5.2 millions tonnes. Deliveries from Australia, Cuba, Guatemala and South Africa are foreseen to increase as well, on the back of attractive world prices. A key feature of this year's export market is the fall of exports from India by 81 percent to about 35 000 tonnes. The last year the country exported less than 50 000 tonnes of sugar was 1999.

MEAT AND MEAT PRODUCTS

The economic downturns triggered by the financial crisis in mid-2008 have had a severe impact on the meat sector in 2009, notwithstanding a decline in the prices of major feed ingredients. Accordingly, FAO has revised downwards its estimate of world meat production in 2009 to 282 million tonnes, which is marginally above the 2008 level. Global trade in meat was also very much affected by the deteriorating economic environment, and is now expected to drop by 6 percent, to 23.1 million tonnes, with all the meat markets likely to contract. Meat per caput consumption in 2009 is now estimated at below 41.7 kg, slightly down from 2008, with a small increase in Asia but falling intake in most of the other regions. Prospects for the meat sector in 2010 are brighter, as major economies are returning to a positive growth path. Improved producer returns are anticipated to boost global meat output to 286 million tonnes, with the shorter cycle pig and poultry sectors likely to respond the most to renewed demand, while reduced cattle inventories may constrain beef production in 2010. As import demand in all the various types of meat recovers, global meat trade is set to rebound by 2.5 percent to 23.7 million tonnes next year. Likewise, per caput meat consumption may rise slightly in 2010, consistent with improved income prospects.

Figure 45. FAO international price index for meat products (2002-2004=100)

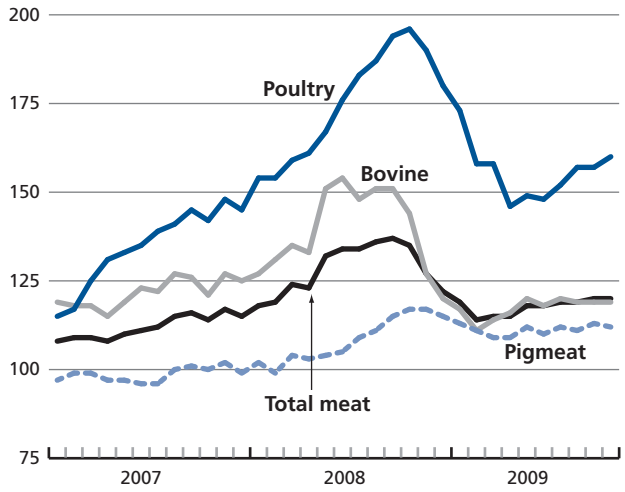


Figure 46. Evolution of meat/feed index prices (2002-2004=1)

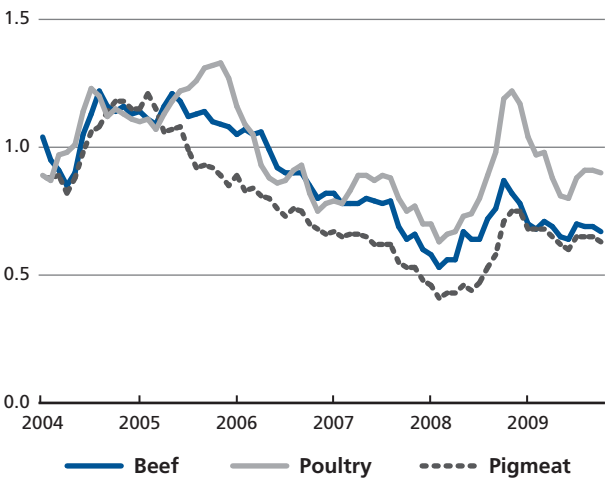


Table 15. World meat markets at a glance

	2008	2009 estim.	2010 f'cast	Change: 2010 over 2009
	million tonnes			%
WORLD BALANCE				
Production	280.1	281.6	286.1	1.6
Bovine meat	65.1	64.3	64.0	-0.5
Poultry meat	91.8	91.9	94.2	2.5
Pigmeat	104.6	106.5	108.7	2.1
Ovine meat	13.2	13.4	13.6	1.7
Trade	24.5	23.1	23.7	2.5
Bovine meat	7.0	6.7	6.8	2.0
Poultry	10.2	9.8	10.0	1.8
Pigmeat	6.1	5.5	5.7	4.2
Ovine meat	0.9	0.9	0.9	1.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	42.0	41.7	41.9	0.4
Developed (Kg/year)	83.1	81.8	82.2	0.4
Developing (kg/year)	30.9	31.0	31.3	0.8
FAO meat price index (2002-2004=100)	2008	2009	2010*	Change: Jan-Nov 2009 over Jan-Nov 2008 %
	128	117*		-8.9

* January-November 2009

BOVINE MEAT

PRODUCTION

Few signs of a recovery in world beef production in either 2009 or 2010

Falling consumer demand, poor pasture conditions and more difficult access to credit have seriously impaired the bovine meat sector in the commercially oriented producing countries in 2009. As a result, early prospects for stable world bovine meat production in 2009 are unlikely to materialize. Instead, production is forecast to contract for the second consecutive year to 64.4 million tonnes, largely on account of falling output in Australia, Brazil, China, the European Union, the Russian Federation, Ukraine and the United States.

Beef output in North America is anticipated to decline by 2.5 percent in 2009 to 13.1 million tonnes, reflecting a contraction in the United States. In the first half of 2009, placements in feedlots in the country were reported to have fallen to a ten-year low as feed prices remained high relative to meat. Although feedlot placements increased in the second half of 2009, the United States Department of Agriculture (USDA) still maintains its forecast of a 3 percent reduction of output. Canada beef production is anticipated to remain unchanged, at 1.3 million tonnes. Beef production in South America is expected to fall by almost 2 percent to 14.4 million tonnes. Most of the decline is likely to arise from a 3 percent expected contraction in Brazil, where the difficult financial situation of abattoirs, arising mainly from a fall of exports to the European Union and the Russian Federation, depressed slaughtering. In Argentina and Uruguay, low profitability and drought took a heavy toll on the beef sectors. Especially in Argentina, these conditions have prompted farmers to liquidate their herds, but because of poor animal conditions, overall production is foreseen to remain in the order of 3.1 million tonnes. In Uruguay, slaughter numbers were unchanged from 2008, but a relatively large share of the animals culled corresponded to cows and heifers. Lower carcass weights are expected to drive production down this year to 520 000 tonnes. In Colombia, production is anticipated to remain unchanged in 2009 at 900 000 tonnes after five years of expansion. In Oceania, aggregate beef production is provisionally estimated at 2.81 million tonnes, or a slight decrease. In Australia, abundant rains in September and October brought some relief after three consecutive years of drought, but came too late to compensate for the earlier damage. As a result, beef output is foreseen to contract by 2.5 percent. In New Zealand, poor pasture conditions and low milk returns induced slaughter and the liquidation of dairy herds, which limited the decline in beef output this year. In Europe, production for 2009 in the European Union is estimated at 7.9 million tonnes, which represents a drop by 1.1 percent as the sector was hit by the financial crisis. Low cattle prices and cash flow pressures are behind reduced carcass weights and slaughter numbers compared with 2008. In the Russian Federation, beef production is anticipated to decrease by 3 percent, despite an ongoing herd liquidation, which suggests that productivity deteriorated substantially this year. In Asia, bovine meat production is estimated to have fallen marginally in 2009 to 16 million tonnes, as declines in China were largely offset by moderate gains in India and Pakistan. In China, production is anticipated to fall by 6 percent, marking the third year of consecutive declines. On the other hand, in India output is foreseen to grow by some 5 percent. Cow beef is not consumed in India but production of buffalo meat, a by-product of the dairy industry, is set to expand only modestly in 2009 due to a less than satisfactory monsoon season. In Pakistan, however, output is expected to grow at 5 percent following good weather and pasture conditions. In Africa, beef production is set to increase by

2 percent, reaching 4.86 million tonnes. In Western Africa, livestock has been affected by persistent dry conditions in several countries, notably in Chad, Mali and the Niger, where livestock deaths have been reported. In Eastern Africa, the scarcity of adequate pasture and water has caused major animals losses and worsened livestock conditions in the pastoral regions of Ethiopia, Kenya, the Sudan and the United Republic of Tanzania, with a detrimental impact on pastoralists' income and their ability to access staple foods. Reproduction rates of livestock have suffered from successive poor seasonal rains since 2007, making the recovery of agropastoral and pastoral livelihood systems more difficult and endangering long-term food security.

Despite brighter economic prospects in 2010, the bovine meat sector may be under pressure in 2010, with global production preliminary forecast to fall slightly to 64.0 million tonnes. Prospects are negative for both Canada and the United States, largely reflecting reduced cattle inventories. In South America, output in Argentina and Uruguay may be constrained by the cattle losses incurred in 2009. However, Brazil, where the herds have not been downscaled, looks in a good position to expand output. Production in Oceania is set to recover only partly in 2010, sustained by modest gains in Australia, while growth will be constrained in New Zealand, as farmers are expected to take advantage of the improved pastures to rebuild their herds. In the Russian Federation, the national beef herd in September 2009 was reportedly down 2.3 percent, which is anticipated to result in a one percent reduction in output next year. The outlook for Asia in 2010 points to another fall, reflecting expectations of a further contraction in China, as low returns are reported to discourage production, especially among lower scale farmers. On the other hand, growth in India and Pakistan are forecast to remain in the order of 5 percent.

TRADE[7] AND PRICES

Bovine meat trade to fall in 2009, with only a limited recovery prospected for 2010

World exports of bovine meat in 2009 have been revised downwards and are now foreseen to fall by 4.5 percent, to 6.7 million tonnes. Much of the decline in global exports reflects poor prospects in Brazil, the largest world supplier, where deliveries are provisionally estimated to drop by 14 percent, reflecting low world prices, a strong value of the Real, and until early 2009, slow demand in traditional markets including the European Union and the Russian Federation. Australian beef exports, totalling 1.27 million tonnes, also faced a difficult 2009 with lower demand from Japan and increased competition from Brazil and the United States. Beef exports from the United States in 2009 have been revised downwards and may drop by 8 percent, to 700 000 tonnes, as larger exports to Asian countries were more than offset by a sharp decline in sales to Mexico. By contrast, deliveries by Argentina are forecast to rise by almost 33 percent from the depressed 2008 level, largely reflecting the granting, by the Government, of larger export authorizations. Poor economic conditions are expected to severely curtail beef imports in 2009 in several of the major markets, in particular Egypt, Mexico, the Republic of Korea, the Russian Federation and Venezuela. Although part of the reductions might be compensated by increased deliveries to North America and Hong Kong SAR, they are unlikely to be sufficient to prevent world imports from falling.

The outlook for global bovine meat trade in 2010 is slightly more positive. Overall, world beef exports may rebound by 2 percent to 6.8 million tonnes, still short of the 7.0 million tonnes traded between 2006 and 2008. Indeed, trade next year is likely to be constrained by reduced export availability in several of the major supplying markets. Much of the increase is likely to rely on Brazil, where ample cattle numbers should allow farmers to respond positively to improved price conditions by increasing slaughtering and exports . Rebounding world import demand may also boost exports from Canada, Paraguay, the United States and Uruguay. By contrast, exports from Australia may fall further, constrained by lower production, as farmers traditionally rebuild their herds after drought. Reduced cattle inventories are forecast to also depress beef shipments from Argentina. As for world bovine meat imports, the global economic recovery is expected to lift consumer demand and imports in Canada, Mexico, the United States and Viet Nam. Purchases may also rebound in the Russian Federation.

International prices of bovine meat, expressed in United States Dollars, were depressed in 2009. They fell consistently in the latter half of 2008 and first quarter of early 2009. Since then, they somewhat stabilized at 18 percent lower levels than their average values in 2008. Despite the devaluation of the United States Dollar, export prices in Argentina fell half way through the year. The prices of bovine meat are anticipated to make some moderate gains in 2010, as supply may fall short of the increasing demand brought about by an improving world economy.

[7] Trade refers only to meat and does not include the meat equivalent of traded live animals

SHEEP AND GOAT MEAT

PRODUCTION

Rebuilding of flocks likely to constrain output growth in 2010

Global sheep meat production is anticipated to grow by 1.7 percent in 2009 to 13.4 million tonnes. Dry weather in recent years reduced flocks in key producing areas, including in **Oceania, South America** and parts of **Africa**. However, better weather conditions currently prevailing in all regions, coupled with strong lamb prices, are encouraging farmers to rebuild their flocks. In **Africa**, dry weather conditions in western and eastern parts of the region have affected herds and therefore pastoralists' incomes and livelihoods. Sheep and goat meat production is unlikely to expand by over 2 percent in 2010 due to restocking. Nevertheless, growth could be stronger in the **Russian Federation** where sheep inventories have increased by 3.5 percent.

TRADE AND PRICES

Good prospect for sheepmeat prices in 2009 and 2010

Sheep meat **trade** in 2009 is forecast to be in the order of 900 000 tonnes, down 6 percent compared with 2008, but early prospects for 2010 point to some recovery. Sheep meat prices performed relatively well, in particular high quality lamb meat which saw prices climbing progressively through the earlier part of the year. World sheep meat prices were sustained mainly because of lower supplies from **Australia** and **New Zealand**, whose combined exports of 753 000 tonnes was down by 3 percent. In addition, import demand from Asia and the Near East, where lamb and mutton is a tradition remain sustained. World prices in 2010 are expected to strengthen, due to a tight world supply situation following reduced flock numbers, especially in Oceania.

PIG MEAT

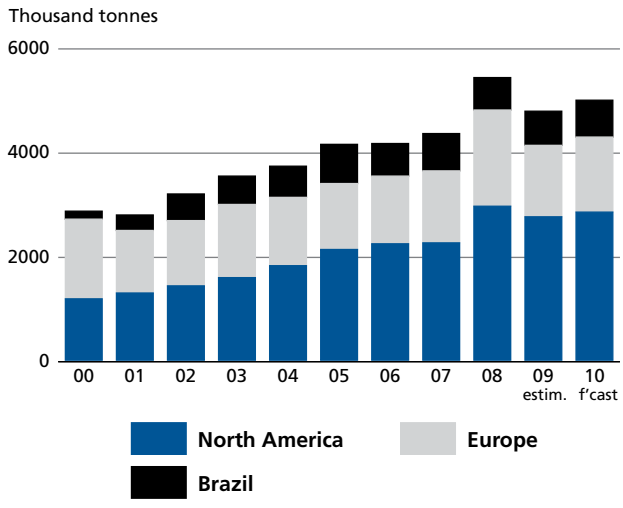
PRODUCTION

Global production to expand in 2009

World pig meat **production** in 2009 is estimated to increase by almost 2 percent to 106.5 million tonnes, sustained mainly by growth in **China,** which accounts for 45 percent of total output. Production in the country is anticipated to grow by 5 percent to 49.7 million tonnes, slower than the 7 to 8 percent increases witnessed in recent years. Analysts believe that the sector has reached maturity and that production growth in the future will be more modest, at some 3.5 percent, and brought about mainly by productivity gains. Indeed, the sector is restructuring, as shown by the large investments in large plants in central, southwest and coastal areas of the country. On the animal health front, the Porcine Reproductive and Respiratory Syndrome (PRRS) is currently under control, although outbreaks cannot be ruled out because, once established, this disease is difficult to eradicate. Production is also expected to increase in **Brazil** and the **Russian Federation,** underpinned by higher herd numbers. However, prospects are mostly negative in the rest of the world, reflecting falling producer returns. Pigmeat output in the **European Union,** which accounts for 21 percent of world production, is set to decline by 3 percent, constrained by reduced animal inventories, brought about by high feed costs and stagnant product prices. In North America, production may also fall in the **United States**, while low financial returns in **Canada** may suppress output growth. In **Mexico**, where producer prices were depressed by the negative reaction of consumers to A-H1N1 outbreak, output contracted by one percent.

Pig meat production in 2010 is anticipated to increase by another 2 percent to 108.7 million tonnes. Output in **China** may grow by a moderate 3.6 percent, while, in the **European Union,** production may recover by 2 percent, sustained by lower feed prices. However, questions remain in the European Union about the impact on the pig meat sector of new legislation related to animal welfare. Production is also expected to grow in **Brazil** and the **Russian Federation**. In the **United States**, where analysts have

Figure 47. Major pigmeat exporters



warned about the negative effect that Country of Origin Labelling (COOL) may have on the import of live animals from Canada, the USDA anticipates a production decline of over 2 percent.

TRADE AND PRICES

Falling world import demand behind a severe contraction in pigmeat trade in 2009

World pig meat **trade** in 2009 is expected to contract substantially to 5.5 million tonnes, a 10 percent fall from last year, driven by a severe deterioration in demand from major traditional importers. All of them are expected to reduce their purchases in 2009, with the exception of **Mexico**. **China's** imports, in particular, look set to decrease by 60 percent, on account of both higher availability of domestic produce and a slowing down of the economy. In the **Russian Federation,** the depreciation of the Rouble, the government import substitution strategy and sanitary import restrictions for non-heat treated pig meat are anticipated to depress imports by 7 percent to 800 000 tonnes. Imports are forecast to fall by 4.5 percent in **Japan** and by an even more pronounced decline of 5 percent in the **Republic of Korea**. By contrast, **Mexico's** imports of pig meat, which had collapsed in May following the outbreak of A-H1N1, recovered strongly in the second half of the year. They are currently estimated to grow 12 percent for the whole of 2009. On the supply side, the dip is likely to arise from lower exports from the **European Union** (-27 percent) and the **United States** (-11 percent), which together accounted in 2008 for over 60 percent of the world pig meat trade. On the other hand, exports from **Brazil** and **China** are anticipated to expand by 5 and 3 percent respectively, while those of **Canada** may stagnate. Global pig meat exports are expected to recover by 4 percent in 2010, sustained by increased exports from **Brazil, the European Union** and **the United States**. As for imports, the expansion is expected to be driven by larger deliveries to **Hong Kong SAR, Mexico** and **the Republic of Korea.**

International pig meat **prices,** which had gained 8 percent in 2008, fell only slightly in 2009. The drop could have been much stronger, save for a significant contraction of supplies in the European Union and the United States, which countered the depressing effects on import demand of a world economy in recession and the erosion of consumer confidence following outbreaks of A-H1N1.

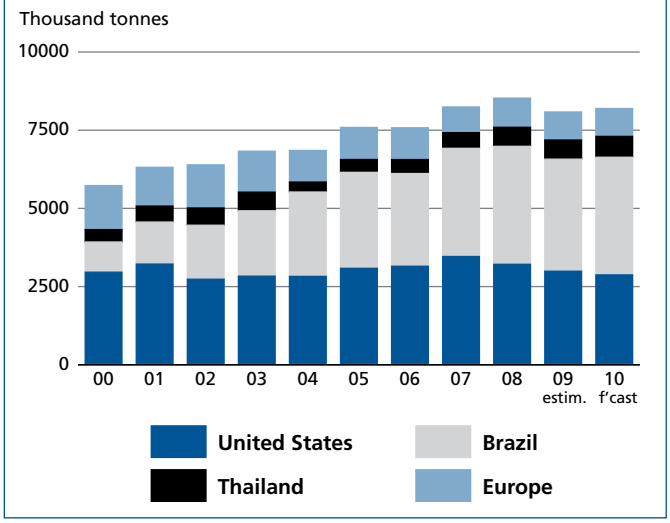
POULTRY MEAT

PRODUCTION

For the first time, world poultry production may stagnate in 2009

The forecast for world poultry meat production in 2009 has been lowered and now stands at 91.9 million tonnes, marginally above the previous year. The downward revision reflects a poorer than first anticipated performances in **Brazil** and **China**. These, together with expectations of an unprecedented 4 percent fall in production of the **United States,** are expected to result in the virtual stagnation of world poultry production. Should these estimates hold true, this would be the first time aggregate poultry production did not show any growth since records have been kept. Output could also fall in **Brazil**, the world's leading exporter, for the first time in 15 years. Other large producing countries facing declines include **Mexico**, where the sector has been affected by the high cost of imported feed, and **Pakistan**, where over one-third of poultry farmers are reported to have scaled down production or closed down operation. By contrast, output is forecast to grow by a modest 2 percent in **China** to 15.4 million tonnes. An expansion is also foreseen in **India, Indonesia, the Philippines** and **Thailand,** where a more favourable feed to poultry price ratio contributed to easing the financial pressures of poultry farms. In Europe, production growth in the **Russian Federation** has been revised upwards and now stands at 12 percent. In the **European Union,** the sector is anticipated to increase by a mere one percent in 2009, as the poultry to feed price ratio deteriorated. In Africa, the poultry industry in **Egypt** is slowly

Figure 48. Major poultry exporters



beginning to stabilize after two years of decline following the discovery of Avian Influenza. Nonetheless, the country may face another 5 percent contraction in 2009. Output is also anticipated to fall in **Morocco**. The situation is more positive in **Benin** and **Nigeria**, which may witness some growth this year, as new broiler processing plants are being built. In **South Africa**, output is anticipated to remain largely unchanged.

Assuming no new disease outbreak, growth in poultry production may rebound in 2010 to some 3 percent, under prospects of a global economy upturn and less expensive feeds. In the **United States,** production is expected to grow in 2010 by over one percent, provided feed prices do not surge. In the **Russian Federation**, the sector is foreseen to keep its momentum, with production rising by 10 percent to 2.8 million tonnes, underpinned by investments in new large poultry processing plants. In **China,** the outlook points to a 3 percent growth to 15.9 million tonnes, sustained by a more dynamic demand. **Brazil** growth is expected to resume a 4 percent expansion, but, in the **European Union,** production may stagnate.

TRADE AND PRICES

Sluggish import demand to depress poultry meat trade in 2009

The preliminary outlook for world poultry **trade** in 2009 is negative, as it is anticipated to drop by 4 percent to 9.8 million tonnes. The contraction in global poultry meat exports would be mostly on account of Brazil and the United States, the world's largest poultry suppliers, which together provide close to 70 percent of global trade. In **Brazil**, poultry deliveries were depressed by the imposition of export restrictions, the strength of the local currency, poor credit availability to exporters and a retrenching demand in key export markets. The only destination where Brazil exports saw growth was the Near East, partly because of a lowering of import tariffs by Saudi Arabia. In the **United States**, exports of poultry meat (which excludes chicken paws) are anticipated to decline by 7 percent, due to the combined effect of low world prices and reduced domestic supplies. Exports may also dip in **the European Union,** by close to 4 percent, while, in **Thailand,** they are expected to remain relatively unchanged. Much of the contraction in global imports is anticipated to result from a 26 percent cut of purchases by the **Russian Federation**, reflecting strong production gains and reduced import quotas. Shipments to some large importing countries also look set to decline, in particular to **China, Japan, Ukraine** and **Venezuela**. However, they may increase by 8 percent in **Mexico,** to compensate for the lower domestic availability of other meats.

The outlook for trade in 2010 is for a mild expansion of 2 percent. Shipments of **Brazilian** poultry have intensified since late 2009 and provided this trend continues, exports in 2010 could expand by 5 percent. However, shipments from the **United States** are expected to fall again, albeit by a more moderate 4 percent. Exports by the **European Union** may not grow either. However, under the prospects of a stable animal health situation, deliveries from **Thailand** may expand by 9 percent. On the import side, the outlook points to an expansion of deliveries to countries in Southeast Asia and the Near East, which would more than compensate for an anticipated decline in **China, Japan** and **the Russian Federation.** The **Russian Federation** is yet to define its new import quota for 2010. However, some press reports indicate that the quota may remain unchanged, which, along with the good production prospects, would point to a stagnation of imports. The outlook is also uncertain for **Ukraine**, where new rules on imports are expected to be applied in 2010. However, deliveries **to Hong Kong SAR, Iraq, Kuwait** and **Saudi Arabia** may rise. There is much uncertainty regarding the next year purchases by the **European Union**, as it is unclear whether the new legislation on animal welfare will also concern imported poultry.

International poultry **prices** strengthened for most of 2009 in the United States, in line with declining production. In Brazil, they showed signs of picking up during the second half of 2009, driven mainly by higher demand from countries in the Near East. World poultry prices in 2010 are not expected to depart much from current levels, as the 2 percent increase in supply may be enough to satisfy the expected mild recovery of global demand.

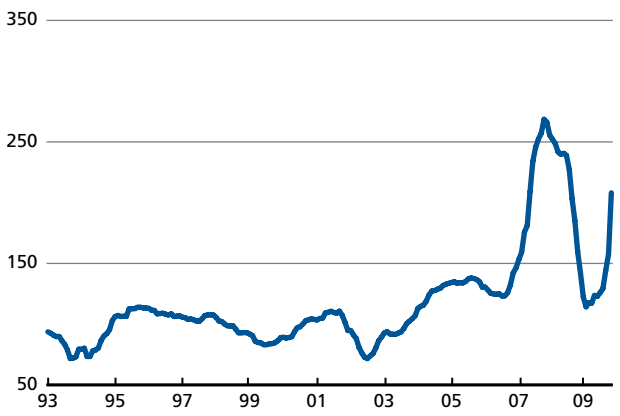
MILK AND MILK PRODUCTS

PRICES

Dairy products prices rebound sharply

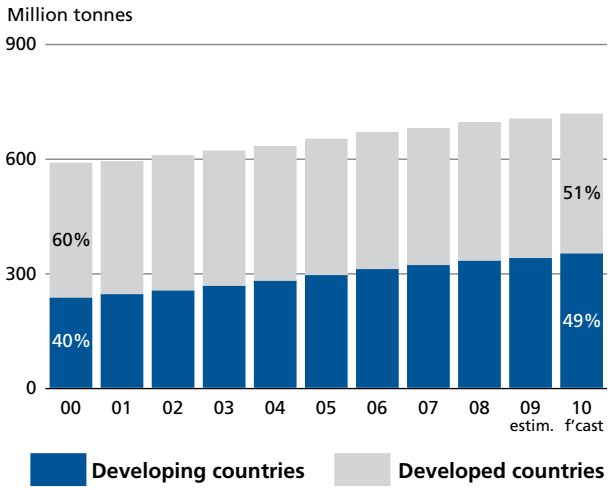
The FAO Dairy Price index of international dairy product prices (Base 100 in 2002-2004, Oceania export prices), have been rising rapidly in recent months, and in November reached 209, an increase of 82 percent from its previous low of 114 in February 2009. The Index rose by a full 32 percent in November alone, sparking speculation about a repeat of the large price spike that took markets by surprise three years earlier. All dairy products are showing signs of strong recovery to levels not seen since August 2008. The largest

Figure 49. FAO price index of dairy products in international trade (2002-2004=100)



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

Figure 50. Developing countries increase production share



increase has been displayed by butter, the price for which has doubled since February to USD 3 688/tonne. However, prices for both skim milk and whole milk powder have also increased by over 90 percent to USD 3 375 and USD 3 525/tonne respectively. The causes of this rapid price rise are not fully clear at the writing of this Outlook, particularly in view of the large public stocks for both butter and skim milk powder available in the European Union. However, stock retention combined with reduced milk output in the European Union and the United States, and lower growth than expected in Oceania's milk output may be contributing factors to tight export supplies. The economic recovery underway in large Asian importing countries and in certain oil exporting countries may also be an important factor in renewed import demand. The sustainability of the rise in prices is uncertain, though contingent on the responses of the European Union and other exporting countries which hold dairy product stocks.

PRODUCTION

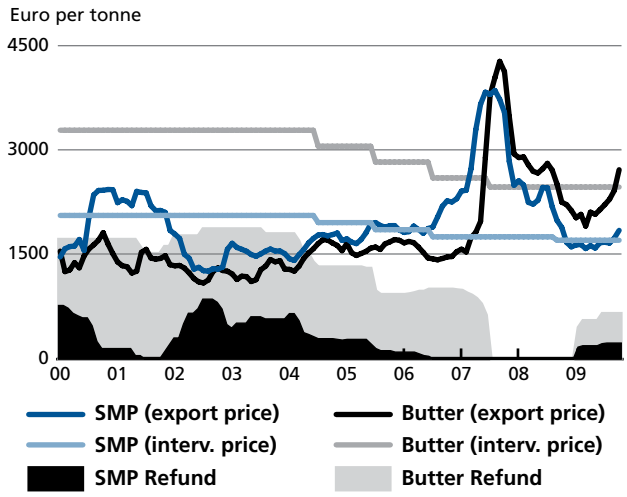
Modest expansion in dairy production anticipated in 2009 and 2010

World milk production in 2009 should reach 701 million tonnes, or an increase of just over one percent, with production growing faster in developing countries than in developed countries. The gap between these differing patterns of growth is expected to widen in 2010, with high growth in the developing world at 4 percent and a virtual stagnation of output in the developed countries. Milk production in 2010 should grow by close to 2 percent, to a total of 714 million tonnes.

Milk production in **Asia** is set to grow by 3 percent in 2009 to 255 million tonnes. Production in **India**, the world's largest producer, should reach 112 million tonnes. This represents moderate growth, 3 percent, as pasture growth was affected by a poor monsoon season. In **China**, consumer confidence has recovered from the melamine crisis and output is expected to grow by 5 percent, to 43.6 million tonnes. In **Pakistan**, where normal weather conditions prevail, output is anticipated to remain unchanged at 33.2 million tonnes. In 2010 Asia is anticipated to expand milk production by 4 percent, reaching almost 265 million tonnes. **India** is forecast to grow moderately, some 4 percent, due to the below average rains from the likely occurrence of "El Niño". Output in **China** is anticipated to return to higher growth, at 9 percent, a figure still below its track record of recent years. This conservative estimate is based on the persistence of low farm-gate prices and tighter feed and water availability.

In **Europe**, output in the **European Union** for 2009 will likely remain relatively unchanged despite market intervention and the expansion of production quotas, at 154 million tonnes. Demand for dairy products stagnated in 2009 and farm gate prices decreased substantially with the fall in international prices, eroding profitability and deteriorating farm liquidity. Domestic prices fell to such an extent that traders were selling butter and skim milk powder (SMP) to intervention, and using export subsidies. However, by September, market prices were again above intervention levels and purchases stopped. Milk production in the **Russian Federation**, at 32.8 million tonnes, represents an increase of a mere one percent over 2008, on account of low fodder reserves that were prepared for winter and

Figure 51. EU intervention prices, price and export refund for butter and skim milk powder



a slight reduction of the national dairy herd. Production in **Europe** in 2010 is anticipated to remain stagnant reflecting the low price incentives of the past year and continued higher feed prices. Summer droughts in parts of **the Russian Federation** have constrained once again the building of fodder reserves for winter and therefore production may remain relatively unchanged.

In **North America**, milk production for 2009 in the **United States** is estimated to decrease by one percent on account of low farm gate prices and the deterioration of the milk/feed price ratio. Output may fall to 85.5 million tonnes. Cooperatives Working Together retired a quarter of a million cows, which also contributed to the slight reduction of output. In **Canada**, where production is governed by quotas, milk output is anticipated to remain relatively unchanged at 8.3 million tonnes. The trend of declining output in the **United States** is expected to continue in 2010 with a further one percent fall in production, although the price ratio of milk to concentrate price improved consistently through the second half of 2009, and should this trend continue into 2010, production estimates may be revised upwards.

In **South America,** where low prices and drought affected the dominant pasture-based production systems, output for 2009 is anticipated to stagnate at some 57.7 million tonnes. Production in **Brazil may** remain unchanged at some 28 million tonnes. Following from exceptional growth of deliveries in the past two years, these came to a halt because of drought that affected mostly the southern states, and forced farmers to feed expensive concentrates. Deliveries were down 8 percent in the first quarter of 2009, and although weather conditions improved for the rest of the year, the recovery is unlikely to compensate for the earlier production deficit. In **Argentina,** output is anticipated to increase by a mere one percent, reaching 10.4 million tonnes. Drought affected crops during late 2008 and early 2009, and winter provisions of hay and silage were poor. However, output increased towards the end of the year with improved weather conditions and a ARS 20 ct/litre (some 5 USD cts) compensation provided by the Government in July. In **Uruguay**, production growth resumed in 2009 at the rate of 2 percent, as farms recovered from drought. Output is estimated at 1.6 million tonnes. In **Chile**, producer prices in 2009 fell 25 percent and production is set to decrease by 5 percent. In light of the above, and provided normal weather conditions prevail, aggregate production in **South America** for 2010 should reach 59.1 million tonnes, or an expansion of 2.5 percent.

In **Oceania**, dairy production in marketing year 2008/09 reached 26 million tonnes, or an expansion of 6 percent. Output in **New Zealand** is estimated at 16.6 million tonnes, growing by 8 percent, as the country recovered from a prolonged drought. In **Australia**, and despite favourable weather conditions, milk output increased by a mere 2 percent to 9.4 million tonnes. Farmers, faced with low farm-gate prices, fed less feed concentrate, a key input in production. Relatively good weather and climbing world prices towards the end of 2009 present a more encouraging production environment in Oceania its 2009/10 marketing year. However, only a moderate 2 percent growth is expected in **New Zealand** under prospects of dry weather conditions from the occurrence of "El Niño", and recent cash flow difficulties of farmers. Output in **Australia** is set to

Figure 52. Ratio of milk product prices to feed prices (2002-2004=1)

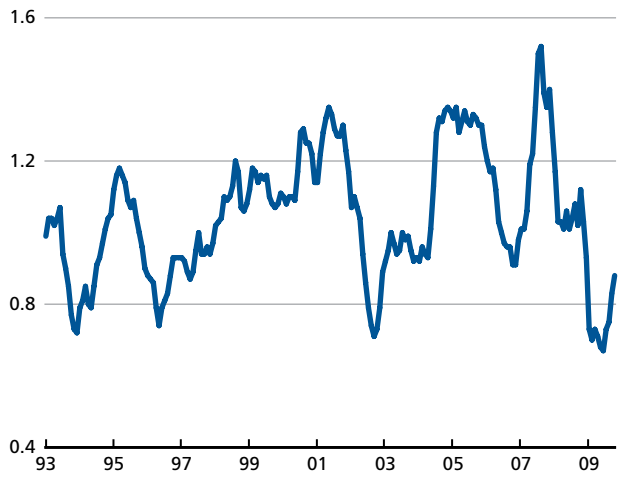


Table 16. World dairy **markets at a glance**

	2008	2009 estim.	2010 f'cast	Change: 2010 over 2009
	million tonnes milk equiv.			%
WORLD BALANCE				
Total milk production	**691.7**	**700.9**	**713.6**	**1.8**
Total trade	**40.5**	**38.6**	**40.6**	**5.2**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World *(kg/year)*	103.7	103.8	104.5	0.7
Developed countries *(Kg/year)*	246.0	248.2	247.6	-0.2
Developing countries *(Kg/year)*	65.6	65.7	67.2	2.2
Trade - share of prod. (%)	5.9	5.5	5.7	

FAO dairy price index (2002-2004=100)	**2008**	**2009**		**Change:** Jan-Nov 2009 over Jan-Nov 2008 %
	220	135*		-41

* January-November 2009

fall 2 percent as a result of low profitability, a deterioration of the short-term debt situation that constrains the purchase of feed concentrate and the likely recurrence of dry weather conditions.

Aggregate 2009 milk production in **Africa** is expected to grow just over one percent, reaching 36.6 million tonnes. In **North Africa**, favourable weather conditions fostered pasture growth, and production should expand by some 5 percent in Egypt (4.9 million tonnes), and by a moderate 2 percent in Algeria (2.2 million tonnes). In **West Africa** rains also favoured pasture development, but poor rains and low pasture growth in Southern Sudan constrained milk production. Production in **South Africa,** has trended upward in recent years, but may reach 3.2 million tonnes, growing by a mere one percent, as drought affected most of the country. In **Eastern Africa**, several countries report livestock deaths due to drought. In Kenya, dry weather is constraining dairy production, and output is set to decrease by 5 percent to 4.2 million tonnes. For 2010, milk production in Africa is anticipated to grow 2 percent, reaching 37.4 million tonnes. In **Eastern Africa**, however, the tight supply situation has resulted in firm farm gate prices, and prospects of growth in domestic and regional (Common Market for Eastern and Southern Africa - COMESA) import demand in 2010 are encouraging commercial farmers to invest in pasture development. In addition, "El Niño" may bring above normal weather conditions, imperative for good for pasture growth. In **Southern Africa**, "El Niño" is likely to have the opposite effect of below-normal precipitation and milk output may increase only slightly.

TRADE

Exports of dairy product likely to fall in 2009 and recover in 2010

Despite a rebound of exports from **New Zealand** and **South America,** global exports in 2009 of the most important milk products, in milk equivalent terms, are forecast to decline 5 percent, falling to 38.6 million tonnes. This fall is due mainly to an estimated reduction of 3 million tonnes in the exports from the **European Union** and the **United States**. In these countries, where the combined exports accounted for 14 million tonnes in 2008, or one-third of world trade, traders were not attracted by world markets during the first half of the year, and preferred instead to stock or sell milk products in domestic markets. On the import side, the world market had been characterized by weak demand and prices, with a notable contraction in imports by some countries. For example, Venezuela's imports are estimated to fall from 2.5 to 1.7 million tonnes. However, with shrinking export supplies, the end of 2009 is characterized by firmer prices, and the outlook for 2010 is for a return to the trade levels of 2008, or an increase of 5 percent. Higher prices, and the recovery of the world economy is creating a renewed interest of traders on export markets, particularly in **Asia**. The outlook for 2010 depends to a large extent, however, on the reaction of United States traders, and on whether the European Union will liquidate its high dairy product stocks under more favourable price conditions, where they are not required to provide export subsidies.

Exports from **Oceania**, the world's largest supplying region for dairy products with a volume of 15 million tonnes in milk equivalent, is anticipated to expand 10 percent in calendar year 2009, with **New Zealand**, the world leading exporter with 11.3 million tonnes, expanding by 9 percent. New Zealand's whole milk powder (WMP) export volumes are up 7 percent with high exports to Algeria, China and Indonesia, while SMP exports are up 24 percent with larger shipments to Southeast Asian countries. Exports of butter are higher by 10 percent, as larger exports to Egypt, Iran and the Russian Federation more than compensated for lower shipments to Europe. Conversely, cheese exports may fall 5 percent, as larger purchases from China and the United States may not offset the reduced sales to Japan. Exports by the third largest world exporter, **Australia** at 3.7 million tonnes, are anticipated to grow by 12 percent in milk equivalent terms. About one-third of Australian milk production is exported,

and therefore as with New Zealand, the performance of export markets has a direct impact on the economy of the sector. As such, the financial problems that the dairy industry faces today were to a large extent due to low world dairy prices during its marketing year 2008-09 and the steady strengthening of the Australian Dollar. Export growth in 2010 from Oceania may be close to 10 percent, reaching 16.4 million tonnes in milk equivalent. **New Zealand** export growth is expected to rise 12 percent, as better world prices should encourage the sale of stocks, which some analysts believe were some 360 000 tonnes in early 2009. **Australian** dairy product exports are not expected to expand despite renewed interests from Southeast Asia, China, Japan and Saudi Arabia in late 2009, given its reduced level of milk production.

Exports in 2009 from the **European Union**, currently the second largest exporter after New Zealand, are anticipated to fall 12 percent to 8.4 million tonnes. The fall is due mainly to the retention of stocks and stagnant milk production. The pattern of falling world export shares is not new, and coincides with the implementation of domestic market reforms. Intervention prices have been substantively reduced since 2003, and producers have been compensated with, by and large, decoupled single farm payments. This policy responds to the European Union commitment to reduce market support and intervention in the domestic market in favour of the provision of safety nets in times of crisis. The Commission intervened during the recent episode of low world dairy prices through the purchase of milk powder, butter and export subsidies. By mid November, European Union stocks of SMP amounted to 268 000 tonnes, and public and private stocks of butter at around 150 000 tonnes. European Commission officials emphasized in September that public stocks would not be released in the short run, but when their sale is unlikely to upset the recovery of the market. Exports in 2010 are forecast to decline 4 percent, but much depends on the evolution of global prices.

In the **United States**, exports of milk products may fall by 2 million tonnes in milk equivalent terms in 2009, which would bring the total of United States exports to 2.3 million tonnes. The decline reflects the low interest by traders given relative domestic and international product prices. However, a weak United States Dollar and the recovery of world prices at the end of the year have brought about a renewed interest on export markets and USDA forecasts 2 percent growth in exports for 2010.

In **South America**, exports of dairy products in 2009 may grow 15 percent, reaching 3.6 million tonnes, as a result of an expansion of exports from Argentina, Brazil and Uruguay, where production in the previous year was affected by drought. Exports from **Argentina** (1.4 million tonnes) are expected to grow by 10 percent thanks to larger shipments of milk powder to emerging economies, while a renewed interest in cheese is also noted by traders. Exports from **Brazil** are estimated to expand substantially, over 40 percent, and to surpass for the first time the benchmark of one million tonnes in milk equivalent terms. Brazil was importing one million tonnes of dairy products in 2002, and used to be a key export market for both Argentina and Uruguay. However, the steady expansion of milk production of recent years, at an average of 4 percent per annum since year 2000, has resulted in the progressive substitution of imports by domestic production, to the extent that Brazil is now a net exporter. The Government of Brazil, aiming to protect producers during the recent episode of low world prices, imposed import quota restrictions on SMP, a move also made by **Chile** and **Colombia**, which in 2009 applied temporary safeguards in the form of higher import duties. Exports from **Uruguay** should expand 10 percent, well above 600 000 tonnes in milk equivalent terms, with cheese to Mexico and Venezuela, and SMP to Cuba and Venezuela. Export growth in South America is forecast to slow down in 2010, to about 6 percent over 2009, as a result of slower export growth from Brazil.

Global trade in milk products

Global trade in whole milk powder (WMP), which amounts to 1.9 million tonnes in product weight, is anticipated to decrease slightly in 2009, by about 2 percent. About half of the world's WMP production is traded in the world market and the largest outlets are developing countries. While imports by African, Asian, Central America and Caribbean countries are anticipated to grow, aggregate imports may fall in 2009 mostly because the world's largest importer, Venezuela with a share of 15 percent (in 2008), may buy 30 percent less WMP. In addition, Venezuela is now buying more WMP from South American countries, a move that affects New Zealand, its traditional provider. The recovery of Oceania WMP export prices in the second half of 2009 is in fact believed to be supported by higher demand from China. A rebound of imports is expected for 2010, with an 8 percent increase due to a large extent to higher imports from Venezuela.

The cheese trade, which amounts to 1.67 million tonnes and is the most important in value terms among the dairy products, was negatively affected in 2009, as exports are expected to fall by 7 percent. The fall is due to lower imports from Japan, the Russian Federation and the United States, which together account for more than 40 percent of the

world market. Imports by Japan and the Russian Federation accelerated towards the end of the year, and should this trend continue into 2010, the outlook for next year is for a 2.4 percent growth in world cheese trade.

Global exports of butter in 2009 may amount to 770 000 tonnes in product weight, a fall of 3 percent compared with 2008. The 10 percent expansion of butter exports from New Zealand are being offset by lower exports by the European Union, India, Ukraine and the United States. More than 40 percent of the world butter trade is purchased by Asian countries, whose demand is anticipated to fall by 7 percent. Russian imports, with a 17 percent share of the world market, are anticipated to be stagnant. If butter stocks in the European Union are released in 2010, they would contribute to a 7 percent expansion of butter trade. Imports from Asia are forecast to grow by 5 percent while those of the Russian Federation may rise by less than 2 percent.

Table 17. Major exporters of dairy products

	2008	2009 *prelim.*	2010 *f'cast*
	thousand tonnes		
WHOLE MILK POWDER			
World	**1 936**	**1 901**	**2 063**
New Zealand	618	664	664
European Union *	484	386	350
Australia	138	166	144
Brazil	83	121	130
Argentina	103	115	122
SKIM MILK POWDER			
World	**1 198**	**1 072**	**1 104**
New Zealand	248	307	321
USA	380	195	200
European Union *	177	165	170
Australia	117	158	150
BUTTER			
World	**792**	**771**	**803**
New Zealand	325	357	357
European Union *	150	140	150
Belarus	62	65	70
Australia	48	58	66
CHEESE			
World	**1 794**	**1 670**	**1 746**
European Union *	555	520	520
New Zealand	295	281	304
Australia	207	151	194
Belarus	102	100	102

* Excluding trade between the EU member states

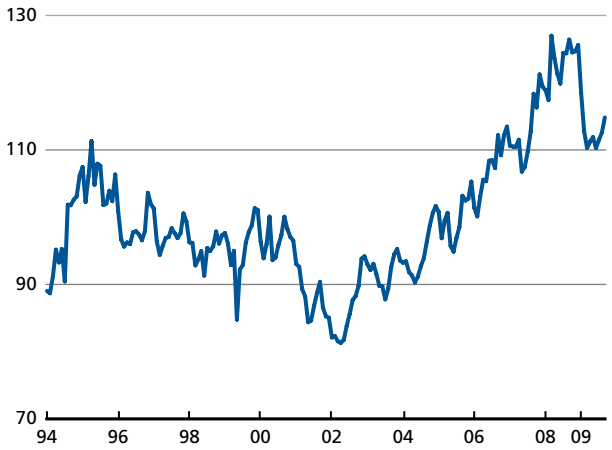
Global trade in SMP amounts to about one million tonnes in product weight and is anticipated to fall some 10 percent in 2009. Demand from Africa has fallen by 25 percent, but purchases from Southeast Asia have grown significantly, in particular due to the renewed interest by the Philippines (11 percent) and Malaysia (18 percent growth). Though impressive, these rates of growth only bring these countries to an import level similar to that of 2007. Imports of SMP by China may double in 2009. Markets purchased products mainly from Australia and New Zealand, who together sell more than 40 percent of the world's SMP. Purchases by Mexico (second largest importer) are anticipated to increase by 4 percent, but those from other Central American and Caribbean countries may fall. With these current trends in the world market, the outlook for 2010 is for a 3 percent increase, mainly due to larger purchases from Asian and Eastern European countries.

FISH AND FISHERY PRODUCTS

GLOBAL FISH ECONOMY

On balance, 2009 has been a challenging year for fisheries following the global economic downturn that induced a general sector-wide demand-led contraction. Although the worst seems to have passed, with trade slowly beginning to expand in several key markets, activity remains far below the levels registered in the run up to the recession. As a result,

Figure 53. FAO-UiS Fish Index (University of Stavanger)



Data source: Norwegian Seafood Export Council

Table 18. World fish markets at a glance

	2007	2008 estim.	2009 f'cast	Change 2009 over 2008
	million tonnes			%
WORLD BALANCE				
Production	**140.4**	**143.0**	**144.1**	**0.8**
Capture fisheries	90.1	89.9	89.8	-0.1
Aquaculture	50.3	53.1	54.3	2.3
Trade value (exports USD billion)	93.5	101.6	93.4	-8.1
Trade volume (live weight)	53.1	52.8	52.3	-0.9
Total utilization				
Food	113.7	115.6	116.6	0.8
Feed	20.4	20.5	20.3	-0.8
Other uses	6.3	6.9	7.2	4.3
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/year)	17.0	17.1	17.1	-0.3
From capture fisheries (kg/year)	9.5	9.3	9.1	-1.5
From aquaculture (kg/year)	7.5	7.9	8.0	1.1
Fish price index [1] (2002-2004=100)	2007	2008	2009 Jan-Sep	Change Jan-Sep 2009 over Jan-Sep 2008 %
	113	123	113	-8.1

[1] FAO University of Stavanger Fish Price Index

2009 import values and volumes are forecast to end up lower than those of last year: global import demand could contract by 8.5 percent in 2009, 10 percent in developed countries and a more modest decline of 4 percent in developing countries; and as for import values, a near 10 percent fall is predicted in Japan, and declines of almost 7 and 13 percent, projected respectively, in the United States and in the EU.

Fish, however, is still expected to remain a widely traded commodity in the year with an estimated 37 percent of all production destined for the world market (live-weight equivalent). While the process of recovery in some markets will be lengthy, the outlook for 2010 remains generally positive as does the longer-term trend for fish trade, with rising shares of production in both developed and developing countries entering international markets.

The trend in falling fish prices which began in late 2008 appears to have finally abated. Moderate price increases for most species have been registered for several months in succession. This development reflects a resurgence in demand against lower supply potential in the recession-hit farmed fish sector. Indeed, the FAO Price Index reached 126.4 in September 2008 and fell drastically hitting bottom in March 2009 at 110.3. It has since recovered to 115 in September 2009 (base year 2005 = 100).

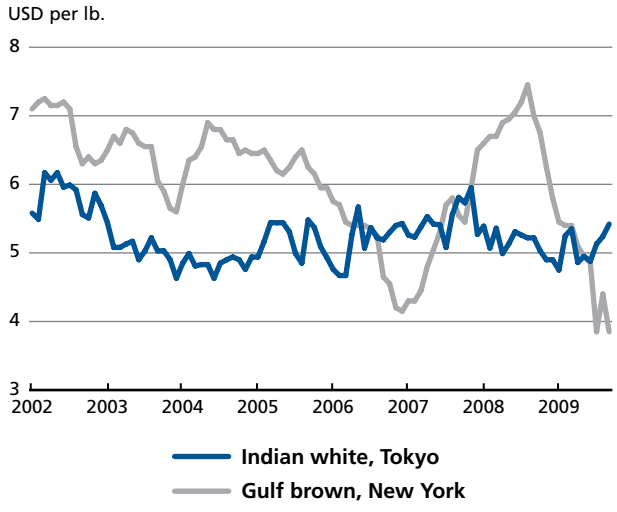
SHRIMP

Of all fish products traded, shrimp is the most important, with a global export value share of about 15 percent. Shrimp is mainly produced in developing countries and well over half of all production finds its way onto the global market

A tentative recovery is underway in the shrimp sector following a difficult trading environment towards the end of 2008 and early 2009, a period during which shrimp aquaculture producers cut back on production. International shrimp quotations which had bottomed-out in mid-2009 are slowly starting to move upwards. In the key import market of Japan, the economic crisis prompted a shift towards greater shrimp consumption at the expense of higher valued fish products. Shrimp imports into the country in the first half of 2009 were slightly higher than in the same period last year. In the United States, demand remains steadfast. Over the first six months of 2009, shrimp deliveries were almost unchanged compared with the same period last year. By contrast, the European Union market remains depressed, but higher price movements in recent weeks could signal an upturn in demand.

The outlook for the global shrimp market is bright. A stronger yen that has supported greater Japanese shrimp inflows during September and October is likely to continue in the near term. Economic recovery in key import markets, especially the United States, is expected to pave the way for larger international shipments, and as a result, prices are expected to firm up.

Figure 54. Shrimp prices



TUNA

Tuna represents about 8 percent of total world fish exports in value terms, a share that has been in steady decline over the past decade. Among the fishery sectors, only tuna is characterized by a high degree of industry concentration with few companies in control of global production and the trade. The world tuna market can be divided into two products: the market for sashimi tuna and the market for canned tuna.

Demand in Japan for sashimi tuna was unseasonably strong in mid-2009, as fewer Japanese ventured overseas in tourism. As a result, prices of sashimi tuna climbed up. This is in contrast to the market for canned tuna. Demand weakened considerably in the middle of the year and prices are expected to weaken in the coming months.

The year 2010 is expected to be a difficult one for the global tuna industry, with several new regulations coming into force. Overhanging the sector, especially Japanese consumers, is the prospect of listing Atlantic and Mediterranean bluefin on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix 1. A proposal by Monaco to place these species on the list is scheduled for discussion at the next CITES meeting in March 2010. If the proposal is successful, the price of bluefin is anticipated to soar. Historically, Japan has been the main market for bluefin, absorbing up to 80 percent of global captures.

Tuna canning enterprises also expect that a decision to list bluefin tuna on CITES' Appendix 1 would have repercussions on tinned consumption. The average consumer typically is not aware of the different tuna species and international action to preserve one species will, by many, be regarded as applicable to all.

Figure 55. Prices of canned tuna: USA and Europe

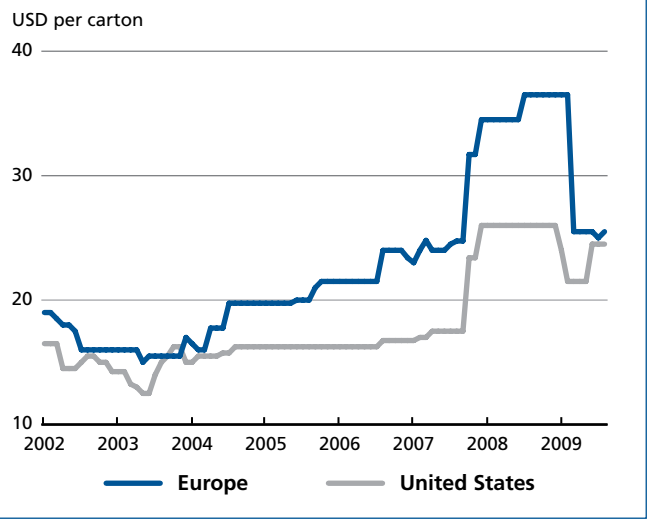
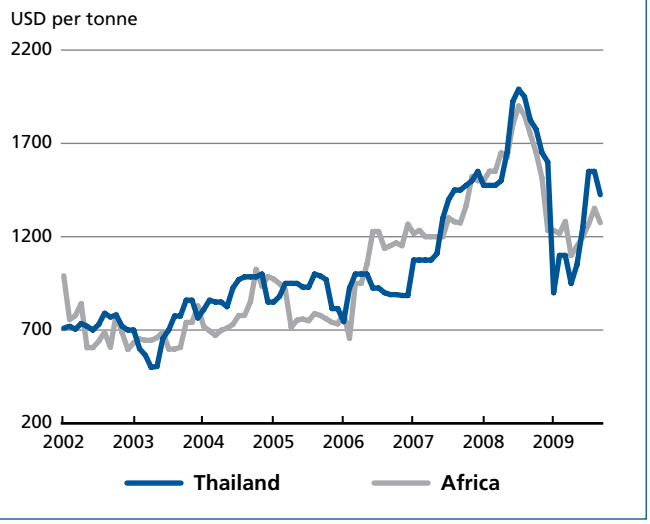


Figure 56. Prices of Skipjack tuna



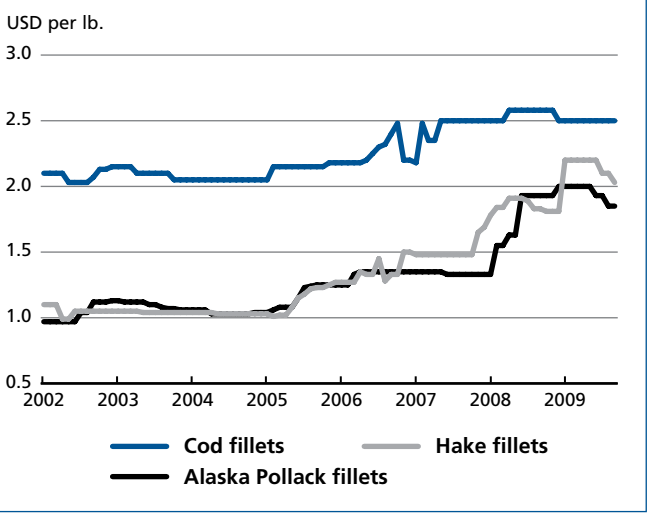
GROUNDFISH

Groundfish species are widely traded, representing about 11 percent of the global fish market, with the main exporting countries concentrated in the northern hemisphere.

In recent years, the wild groundfish sector has had to compete for market share with cultured products, such as pangasius and tilapia. Groundfish supplies were abundant during 2009 with prices trending downward. This tendency is likely to prevail in 2010, as the Russian groundfish catch is expected to rise. It is noteworthy that the impact of low cod prices has also hit profitability prospects in the aquaculture industry.

Alaska pollack is the main capture groundfish species in the world. In 2010, total Alaska pollack catches are

Figure 57. Groundfish prices in the USA



expected to rise by 400 000 tonnes to 3 million tonnes, of which 1.7 million tonnes could be sourced from the Russian Federation's waters The expected increase in supply has already had a negative impact on prices, with quotations falling from USD 1 700/tonne in January 2009 to USD 1 350/tonne at present. Further declines are expected, especially as Alaska pollack fisheries and the stocks in the Sea of Okhotsk are reportedly abundant.

Regarding policy developments, Norway and the Russian Federation have reached a fishing quota agreement for the Barents Sea for 2010, with an overall 82 000 tonnes increase in the cod quota to 607 000 tonnes. Norway's share will amount to 271 000 tonnes, up 16 percent from 2009. The haddock quota will rise from 194 000 tonnes to 243 000 tonnes in total, of which Norway's quota will constitute 116 000 tonnes. The rise in the quotas is attributed to healthy stock levels, especially in Norway, where cod exports are set to increase on the back of higher international demand, in turn reflecting economic recovery and competitive consumer prices.

In the first half of 2009, imports of groundfish by the United States, grew by 14 percent over the same period last year. The underlying reason for the rise in imports to 75 000 tonnes mainly concerns higher purchases of blocks and slabs rather than increased fillet imports. European Union imports of groundfish also increased in 2009, taking advantage of attractive prices. In 2010, competition for market share between captured and cultured species is likely to intensify.

CEPHALOPODS

The international cephalopod market is segmented by import destination: the Japanese and the European Union market. Demand for cephalopods in Japan, especially octopus, has been firm following the slump in international Japanese tourism, whereas in the European Union the downturn in tourist numbers to southern Member States resulted in falling demand for cephalopod species. Seasonal demand and the global economic recovery underway could see prices pick up in the new year.

TILAPIA

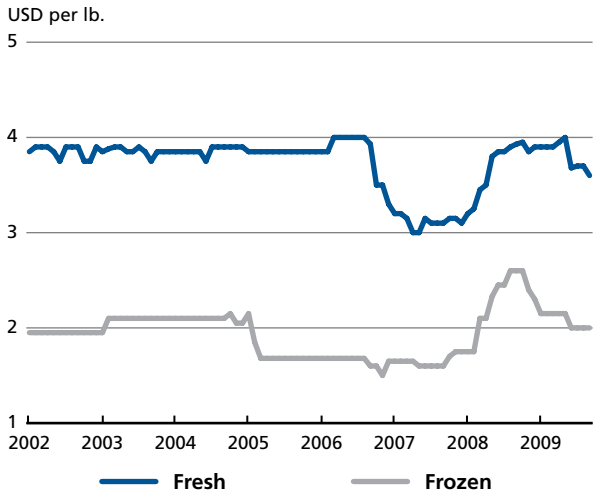
The United States continues to be the dominant destination for world tilapia trade, ahead of the European Union where demand remains subdued. European Union importers in search of cheap whitefish alternatives began importing pangasius several years ago, and being satisfied with the product in terms of price competitiveness and the steadiness of supply, have not been compelled to enter the tilapia market. However, this could change if large-scale commercialized tilapia aquaculture gets underway in Africa. Tilapia prices, as widely foreseen, moved down in the course of 2009, as output in China returned to normal after a very cold winter in the country last year which disrupted production and strengthened prices considerably. Further price slides are forecast in 2010 reflecting an extended recovery in exportable supplies.

PANGASIUS

Rapid growth in the world market for farmed pangasius (a type of catfish endemic to the freshwaters of the Mekong basin) has been registered in recent years. Pangasius is the cheapest of all fish fillets that can be found on the market and its demand is somewhat robust in times of economic crisis. Spain for instance, where the recession was severely felt, reported rising numbers of pangasius imports.

Given the geography of the species in terms of origin, Viet Nam is practically the sole producer with an output of 1.5 million tonnes expected in 2009. The country exported 334 000 tonnes of catfish in the first eight months of 2009, worth an estimated USD 737 million, and propelling the sector as a major foreign currency earner among seafood exports. Early in 2009, exports however, experienced a sudden set-back, partly because of economic problems which affected demand in some of the principal markets, but mainly because the Russian Federation imposed a temporary ban on imports. However, this ban was lifted in May 2009, and since then the pace of exports of pangasius to the Russian Federation has been rapid, such that Vietnam could almost match it export figures of 2008.

Figure 58. Prices of Tilapia fillets in the USA



As for the outlook, a repeat of last year's cycle could materialize: solid supply prospects bringing down prices resulting in lower production. Demand though is gathering momentum in Western Europe and low prices will also assist in the further penetration of markets in Eastern Europe.

SEABASS AND SEABREAM

These predominantly aquaculture species are important for trade in the Mediterranean area, with Italy as the main importing country. Production in 2009 is expected to be lower than in 2008 at 270 000 tonnes. As a result of the economic crisis, liquidity constraints and low prices over the year forced many producers in Greece, Spain and Turkey with weak cash balances to harvest early, thereby increasing supply numbers but also reducing production yields and profit margins. Production cutbacks are still foreseen in most producing countries which could see prices fall levelling off and even rising next year.

The prospect of higher concentration in the industry is uncertain as to date only a few of the small and most exposed fish companies have folded or have been absorbed by larger firms.

SMALL PELAGICS

Small pelagics are a major food commodity, especially in developing countries, where it constitutes an affordable source of protein.

Generally prices of small pelagics are lower than those of groundfish or other competing species. In terms of trade importance, small pelagics account for around 7 percent of total fishery product trade. Herring is the major species entering the global market. Export margins on herring increased during 2009, especially in Norway, when prices trended upwards. Exports of Norwegian frozen whole herring increased in volume by 52 percent from 322 800 tonnes in 2006 to almost a half a million tonnes in 2008. A similar performance to last year's is anticipated in 2009 with robust demand predicted in the principle markets of the Nigeria, the Russian Federation and Ukraine.

SALMON

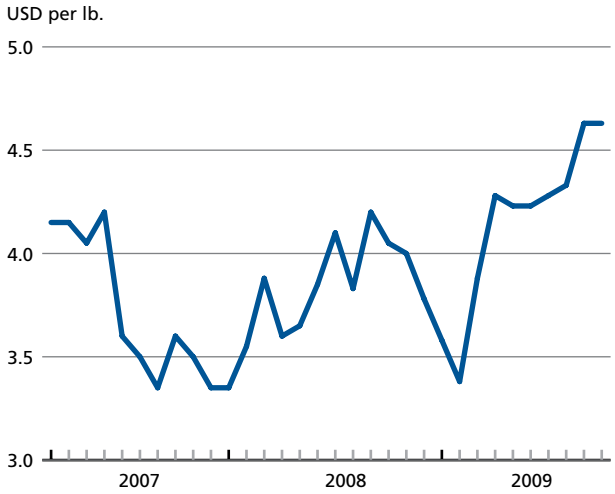
Aquaculture dominates both global salmon production and trade. About two-thirds of world production originates from the sector, and most salmon entering the international market are sourced from farms. Salmon trade has registered exceptional growth in recent years, the share of salmon exports in total fish exports rose from 8 percent in the 1990s to 11 percent at present.

The sector has withstood much of the economic downturn by diversifying its markets geographically and for its products, and maintaining a strong presence in both food-service and in retail. The market, however, for farmed Atlantic salmon has been disrupted in 2009 by lower supplies in Chile as a result of the Infections Salmon Anaemia (ISA) disease. Other major suppliers, especially Norway, have been unable to gear up production fast enough to compensate for the Chilean shortfall, resulting in higher prices this year. In recent months, however, the market has become more unsettled as rapid growth in Norway has pushed many salmon producers there to the maximum limits set by their production licences. As a result market supplies have increased and prices have begun falling. Compared with 2008, Norwegian farmed salmon exports for the first ten months of 2009 increased by 14.5 percent in volume and 32 percent in value (Norwegian Kroner - NOK).

The United States, in particular, increased its salmon imports from Norway given the lack of supplies from Chile. A large part of these new sales to the country are fresh salmon fillets which increased from 1 700 tonnes in 2008 to 14 200 tonnes in 2009 (Jan-Oct). Inventories continue to play a role in meeting international demand, as frozen salmon from last year's harvest is being processed by Chilean companies for value-added product exports. Next year's supply from Chile of Atlantic salmon is also expected to be drastically down, and could slump to low as 60 000 tonnes.

However, the longer-term outlook for salmon markets is fairly positive. Demand should be solid in most import destinations, while in Chile, new regulations for salmon

Figure 59. Atlantic Salmon prices

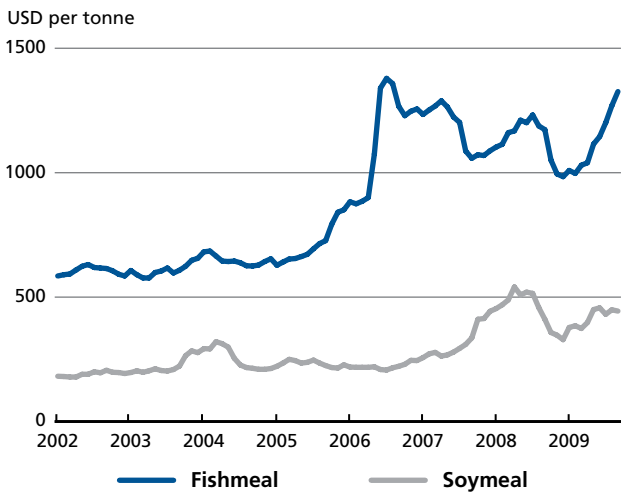


farming, the recapitalization of the domestic industry and the development of an ISA vaccine should lead to the resurgence of a stronger and more sustainable salmon sector in the country. But Chile's full recovery will only likely be felt in world markets until 2011 and 2012 at the earliest.

FISHMEAL

Demand for fishmeal is a prominent driver of the entire fish sector, with about 25 percent of world capture fisheries typically entering fishmeal production. Fishmeal is particularly important for the aquaculture industry: more than half of all fishmeal output is destined to feed cultured species. Barring Chile, which is the only country to anticipate an increase in fishmeal production, combined fishmeal output by the five major exporters is forecast to decline in 2009, in continuation of the trend which started several years ago. Prices began move upwards over the past few months, and further increases are likely in the wake of rising demand in China. This country is again likely to attract more than 50 percent of total fishmeal exports. Weather anomalies will also assist in the price strengthening. With 2009 declared as an El Niño year, albeit a mild one, the catch of Peruvian anchovies, the main raw material for fishmeal production, is anticipated to be very low. Hence, expectations of lower output, combined with steadfast demand in China, all point towards higher prices that are likely to be sustained into 2010.

Figure 60. Prices of fishmeal and soymeal



FISH OIL

Fish oil output, a by-product of fishmeal production, declined in the first half of 2009. Some 365 000 tonnes were produced by the main fish oil exporting countries, representing 20 000 tonnes less than in the same period last year. The greatest decline was reported by Chile, while all other major fish oil producers reported relatively stable output. Fish oil prices usually mirror the trend in fuel prices, and rose in the second quarter of the year. On the back of rising petroleum prices, further hikes in fish oil quotations are forecast in the coming months.

OCEAN FREIGHT RATES

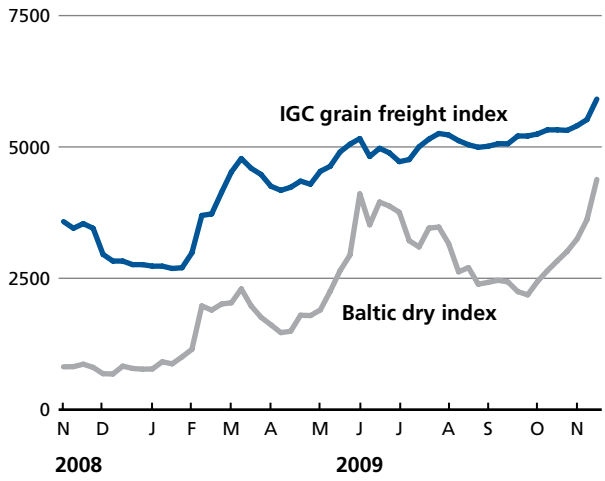
Contributed by the International Grains Council (IGC) (http://www.igc.org.uk)

Ocean freight market (May–November 2009)

The dry bulk freight market strengthened considerably since mid-May but displayed much volatility, particularly in the (non-grain) Capesize sector, which reacted strongly to changes in mineral chartering activity. After rising steeply in May and early June due to sharply increased chartering activity and tight availability of ships, Capesize rates fell back heavily in the following four months as mineral demand subsided and port congestion in China eased. While the downturn affected the other dry bulk sectors, these were relatively steadier, underpinned by a good volume of business, including grains, particularly in the Atlantic, where tonnage supply remained tight. At the end of September, Capesize rates again soared on a renewed surge in Asian minerals demand and reduced tonnage availability, regaining all the lost ground. These movements had a considerable impact on the Panamax sector but much less so on Handysize rates, which showed a more consistent gradual upward trend over the six months. In November rates continued to climb in all market sectors, with charterers favouring tonnage for short periods rather than the more expensive voyage deals. Bad weather in eastern and northern China worsened port congestion and limited the availability of larger vessels. Between mid-May and end-November 2009 the Baltic Dry Index (BDI) climbed by 72 percent, mainly attributable to the sharp increases in the Capesize sector. Over the same period, the IGC Grain Freight Index (GFI)[8], which does not include Capesize vessels, advanced by about 20 percent.

After peaking at the beginning of June, largely mirroring the strength of the Capesize sector, **Panamax** rates

Figure 61. IGC grain freight index and baltic dry index (May 2005=6000)



remained relatively firm for a period, bolstered by heavy demand, particularly in the North Atlantic. Rates then succumbed to the general weakness in the dry bulk market but subsequently steadied. They climbed sharply in October, boosted by busy coal and grains chartering on routes to Europe and Far East Asia, as well as tighter tonnage supply. The Panamax market benefited from the splitting of Capesize cargoes into smaller shipments. The most commonly quoted transatlantic round voyages rose from about USD 25 000 daily in May to about USD 39 000 in November. On routes from South America to Europe rates were recently quoted at USD 27 000 daily. North Pacific rates were also firmer due to a heavier volume of enquiries, especially after coal from Australia and iron ore from India became cheaper than in China. Rates on the route from Indonesia to China climbed to USD 35 000 daily. In the timecharter market, short period contracts for four/six months were quoted at about USD 31 000 daily in the Atlantic and USD 29 000 in the Pacific.

In the **Handysize**/Supramax sector, Atlantic rates were generally steadier over the whole period, firming on solid demand for grains and limited spot tonnage availabilities in the US Gulf, northern Europe, the Black Sea and the Mediterranean. Recent grain fixtures from the US Gulf and South America to Northern Africa and Europe ranged between USD 29.00 and USD 31.00/tonne. A short-period timecharter was settled at USD 18 250 daily. In the Pacific, rates from the Indian Ocean were very strong, those to China quoted at about USD 33 000 daily.

A build-up of surplus tonnage saw **Capesize** rates fall sharply in July after the steep increases seen in previous months. This reflected China's much-reduced mineral demand, particularly from ports in Brazil and Western Australia, exacerbated by the growing Capesize fleet. The fall was also attributed to a seasonal downturn in coal shipments, easing port congestion in China, with more ships becoming available, and a decline in the freight futures market. However, after falling by nearly 70 percent during the third quarter of the year, rates rebounded in October on renewed iron ore and coal buying interest from China, returning to the levels seen in June 2009.

[8] 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 6 000.

Special features

THE FOOD PRICE CRISIS OF 2007/2008: EVIDENCE AND IMPLICATIONS[9]

(This special feature is courtesy of Wright, Brian, D. and Bobenrieth, Eugenio, University of California, Berkeley and University of Concepcion, Chile). The views expressed herein do not necessarily reflect the official opinion of the Food and Agriculture Organization of the United Nations)

INTRODUCTION

The food price crisis of 2007/2008 triggered widespread concern over the volatility experienced in agricultural commodity prices and perhaps more worrisome, concerns that the world had entered a new grain market regime in which such volatility will persist unless strong policy measures are adopted. Several reports claim that grain prices have been drastically inflated by manipulative financial speculation. The fear is that such trading has undermined the price-smoothing capacity of agricultural futures markets, and increased the price risks encountered by consumers, producers and governments. Consumers in many developing countries, alarmed by increases in the cost of their staple foods, demanded policy responses from their political leaders.

The FAO Secretariat's contribution to defining the objectives and possible decisions of the World Summit on Food Security of November 2009 proclaims the need "to address the issue of speculation in agricultural markets given the serious implications it can have for world food security." It notes that "some studies suggest that speculation in food markets played a certain role in the increasing level and volatility of world food prices in 2007-2008" and calls upon the World Bank, the IMF, UNCTAD, FAO and other relevant intergovernmental organizations "to conduct in-depth and comprehensive studies to analyse the causal links between speculation and agricultural commodity price movements, with a view to fostering a coherent and effective policy response in the context of food security." The 2009 UNCTAD Trade and Development Report (p. IV) stated that "Recognizing the lack of economic logic of these [financial and commodity] markets is key to understanding the roots of the current crisis, and should be the basis for further policies and reforms aimed at stabilizing the financial system."

Is the beginning of a new regime characterized by more volatile, if not higher, commodity prices being witnessed? Is the recent turmoil in prices an aberration, involving emergence of new, irrational bubbles, unconnected to market fundamentals? Is it the fruit of purposeful manipulation by global financial forces moving on to disrupt agricultural commodity markets after contributing to a financial bubble that wreaked havoc in the international macroeconomy? Has a lack of regulation of futures and options markets, and/or global international financial flows contributed to the emergence of this new era of market chaos? How significant is the role of expansion of biofuels supply in destabilizing grain markets?

The answers to many of these questions could have important policy implications. Unfortunately, answers are difficult to find, given the state-of-the-art in modelling commodity and financial markets. For the major grains, wheat, maize and rice, which are so important in feeding the population of the world, progress can be made by examining the available market data at an aggregate level.

The question asked in this paper is whether the recent price spikes appear to be qualitatively different from previous episodes observed over the past four decades. Are they new phenomena indicative of a new market regime? Or are they consistent with the operation of commodity intergrain substitution in use for food and feed, and of storage as intertemporal arbitrage, as reflected in market movements over the past several decades?

This paper addresses this issue as a necessary first step in evaluating the merits of "corrective" actions being discussed regarding policies affecting futures markets, agricultural markets and the markets for inputs.

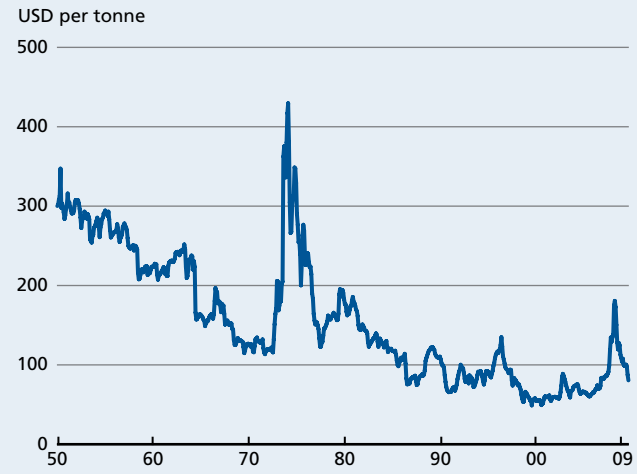
THE PRICE BEHAVIOUR OF THE MAJOR GRAINS

Consider first the recent price behaviour in the markets for the major grains. Figures 1 through 3 show the price histories of the three major grains wheat, maize and rice, in United States Dollars deflated by the Consumer Price Index.

In each case the price shows a notable downward trend, and fluctuations usually within a fairly narrow range. This downward trend is no doubt related to the remarkable

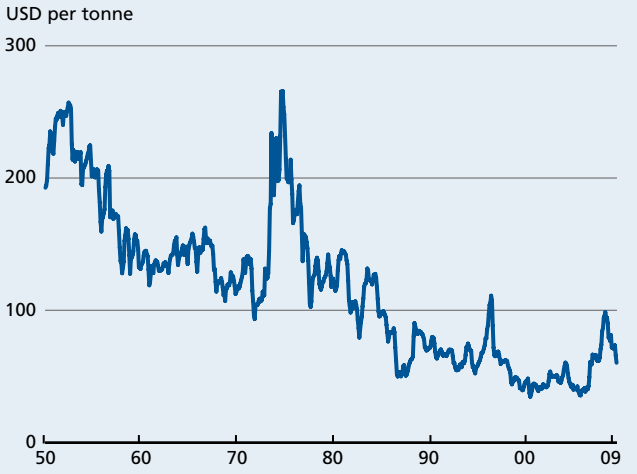
[9] The authors wish to thank Carlo Cafiero for help with this paper, and Di Zeng for excellent research assistance.

Figure 1. Wheat, average price received by US farmers in dollars per metric tonne deflated by US CPI (1982-84=100)



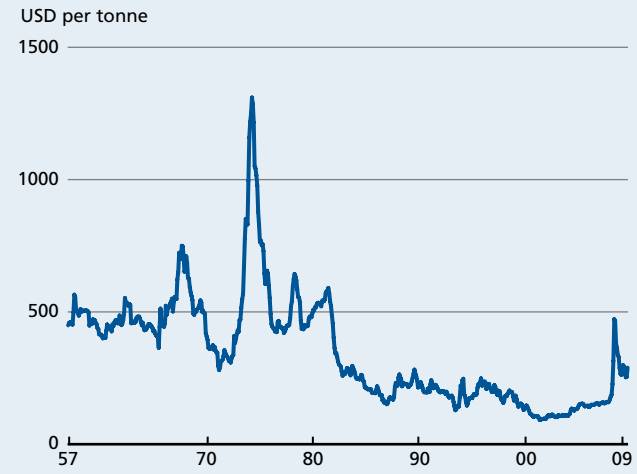
Source: USDA Wheat Yearbook

Figure 2. Maize, average price received by US farmers in dollars per metric tonne deflated by US CPI (1982-84=100)



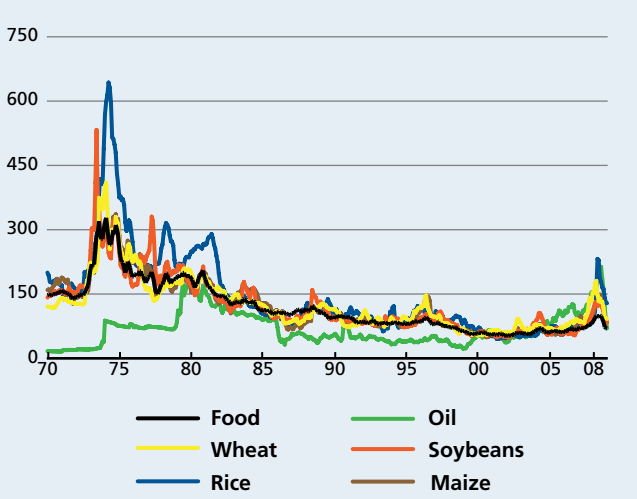
Source: USDA Feed Grain Database

Figure 3. Rice spot price Bangkok, deflated by US CPI (1982-84=100)



Source: Global Financial Data

Figure 4. Long run movements of prices IMF Commodity price indexes deflated by the US CPI

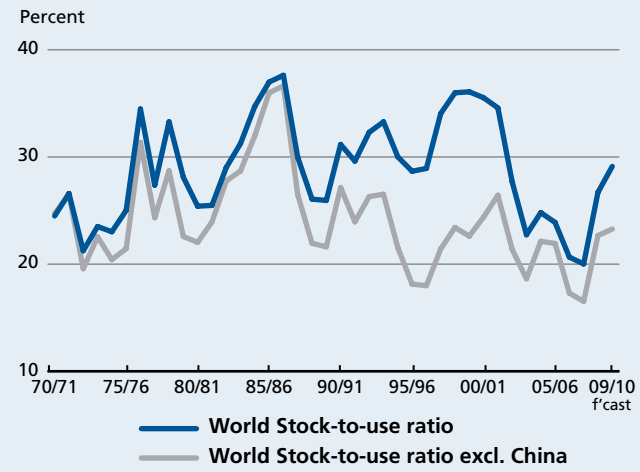


success of plant breeders and farmers in generating crop yields that outpaced the demand shifts generated by worldwide income increases and by population growth in the third world.

Occasional steep spikes in price followed by equally precipitous falls are another prominent feature of the data. It is clear that when price is locally high it is also highly volatile, and when price is low it is also more stable. Figure 4 shows the prices of these three grains along with the prices of soybeans, crude oil and all food, from January 1970. It is clear that all of these commodities had very sharp price increases in the period between 1973 and 1975, and between 2007 and 2008 spikes again occurred in the price of each of these commodities.

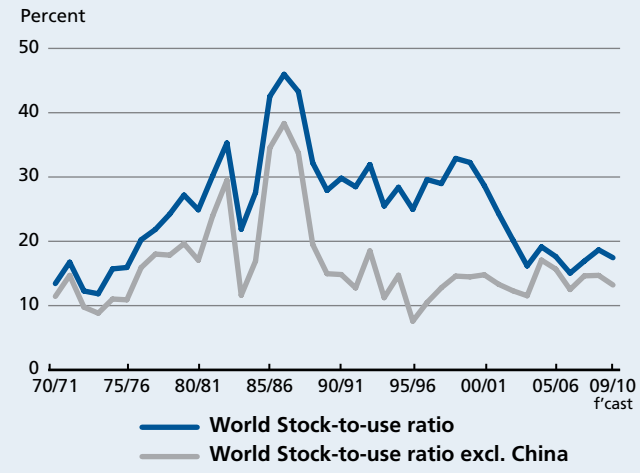
Some observers saw in the recent history of prices a recurrence of the events of the early 1970s. However Figure 4 shows that the recent episode of price spikes was far less dramatic in real terms than the episode in the 1970s. Moreover, as others noted, the international economic situation in the last few years has been very different from that of the 1970s. Many market participants and observers have identified huge international financial flows, low

Figure 5. World wheat stock-to-use ratios



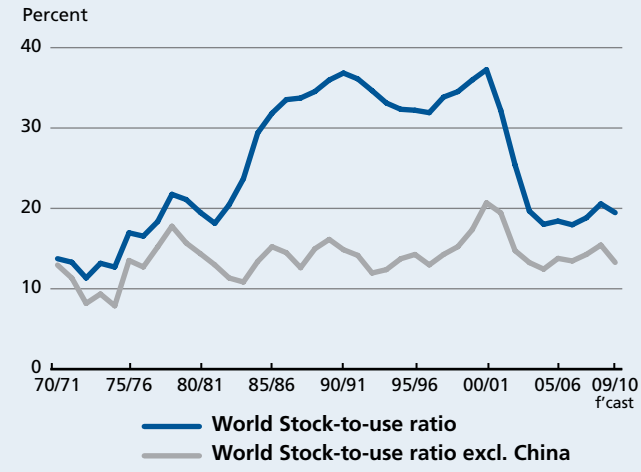
Source: USDA Foreign Agricultural Service - Production Supply and Distribution)

Figure 6. World maize stock-to-use ratios



Source: USDA Foreign Agricultural Service - Production Supply and Distribution)

Figure 7. World rice stock-to-use ratios



Source: USDA Foreign Agricultural Service - Production Supply and Distribution)

interest rates and the recent creation of a bewildering array of markets in financial derivatives as new and powerful sources of market volatility, which they claim must be controlled by new regulations on financial and commodity markets.

An important question is whether the international grain markets are behaving in ways recognizable from a history of the last four decades? Or have these markets entered a new and more volatile regime and require new and different regulations or other interventions to prevent a continuation of the kind of chaos we have seen of the last several years?

CONSUMPTION, STOCKS AND THEIR RESPONSES TO PRICE

Focusing on the world market as a whole, it is important to understand that storage activity is asymmetric. When an abundant supply is on hand after a good harvest, excess supplies can always be placed in storage to be consumed in later years. A subsequent shortfall in production or shock to demand can be cushioned by drawing down the accumulated stocks to maintain reasonable levels of consumption. However if current stocks are at minimal levels, a production shortfall must be accommodated by a corresponding adjustment on aggregate consumption.

For grains such as maize and to a lesser extent wheat that are used as feed for animals and for food for humans, it has generally been true that most of the adjustment to negative shocks is made in the consumption of animal feed, which entails the short run benefit of a surge in supply of meat to consumers. If the shortfall cannot be met by adjustments in non-food uses, consumers must be forced by increased price to absorb the shortfall by reducing their own consumption. Rich and middle-class consumers typically make little or no adjustment, absorbing the price shock by reducing their savings or adjusting their consumption of less necessary goods. So the burden falls on consumers who are poor. They attempt desperately to cover the increased cost of their normal diet by adjusting their savings or non-essential consumption, so a large increase in price is needed to achieve a relatively small reduction in their consumption.

At the aggregate level, the relation between the available supply and price has been difficult to model and to estimate, due to challenges in accurately measuring consumption and its response to price variations. However, substantial progress has been made in estimating the price response even when adequate data distinguishing consumption and stocks are not available[10]. The results indicate that at very

[10] See Cafiero et al., (forthcoming).

high prices, when stocks are minimal, the consumption response to price is very inelastic. Although the data on global stocks are notoriously unreliable, the available information is nevertheless informative about interpreting recent market events in the context of the history of the last four decades. Figures 5 through 7 show stocks to use ratios for wheat, maize and rice.

The ratios are reported for the global market, and for the market excluding China. Chinese policies have in some periods, for example the 1990s, meant that China's grain economy has been essentially independent of the rest of the world, and stocks have been difficult to measure and verify. Note that, excluding China, the minimum ratio of stocks to use appears to be similar in different decades, with the exception of rice, for which the reported 1972-1974 ratio is a low outlier. This reflects the fact that operation of a grain market entails use of a virtually irreducible minimal level of stocks necessary for the efficient operation of transport, marketing and processing of grains. For maize the minimum reported ratio was in 1995/1996, while for wheat it occurred in 2007/08, when rice stocks were only moderately low.

The demands for the three major grains are not independent, because each is an important supplier of calories for food and feed uses. On the other hand it is obvious to any consumer that they are not on average perfect substitutes. However, their price series are highly correlated. We aggregate the calories in the three major grains and examine them as if calories were traded on one unitary global market[11].

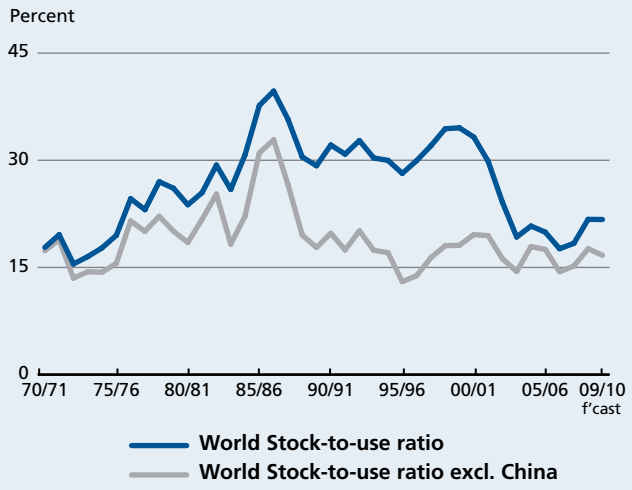
The World's and China's total consumption and ending stocks data are from USDA PSD Online. In order to conduct the conversion, calorie data from the USDA National Nutrient Database are used. Losses in calories between the harvest and the consumer are ignored. For meaningful inferences the crucial assumptions are that food loss ratios are roughly the same for wheat, maize and rice, and do not vary too much over time.

The result is presented in Figure 8:

Note that aggregate stocks were very low in the early 1970s, and similarly low in 1996/1997, 2002/2003 and 2007/2008. These are indeed the epochs with lowest aggregate reported stocks since 1960. It is clear that the minimal aggregate stocks to use ratio is around 12 to 14 percent.

Next we construct a price index for calories. The price is United States Dollars per tonne. Wheat price is for all wheat,

Figure 8. World stock-to-use ratios for calories from wheat, maize and rice



United States, average from USDA. Rice price is for Thai, 5 percent broken, f.o.b. Bangkok. Maize price is average cash price of Maize No. 2 Yellow. For each grain, we can roughly estimate the content of calories per tonne using data from United States National Nutrient Database. Dividing the observed price by the amount of calories per tonne, we can obtain the price of calories as United States Dollars/kcal contained in wheat, maize and rice, respectively. The prices of calories from each grain are presented in Figure 9:

Calorie data are also used to convert export measured in tonnes into calories. Share of calorie consumption of each grain out of the total calorie consumption is used as weight. Note the very close relationship between the maize and wheat prices per calorie, and the strong co-movement of the rice price, at a higher level (all correlations are around 0.9 or higher).

To obtain an aggregate real price index for calories from the three grains, we weight the share of each grain by its current aggregate consumption (in calories), and deflated by the United States Consumer Price Index[12]. Figure 10 combines the plot of the stocks to use ratio for calories with the plot of the aggregate calorie price index, both excluding data for China.

Note that the periods when aggregate stocks are very low, the early 1970s, 1996/1997 and 2007/2008, are all years of sharp upward spikes in the price index from a generally decreasing trend. The exception is 2002/2003,

[11] Roberts and Schlenker (2009) also address the global market for calories from grains, but they include calories from soybeans.

[12] When export share is used as weight, the two price indices are almost indistinguishable.

Figure 9. Price of calories from wheat, rice and maize

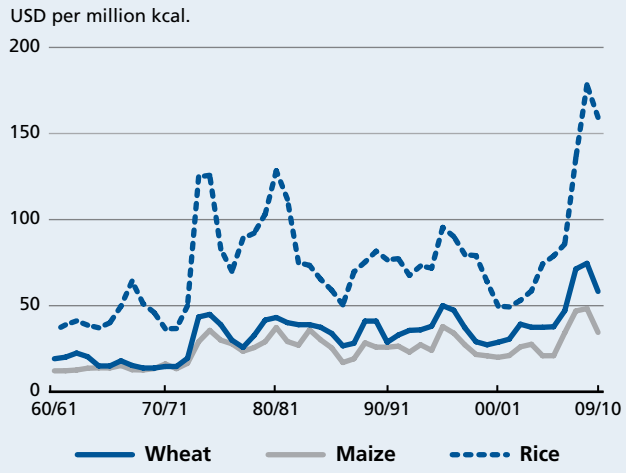
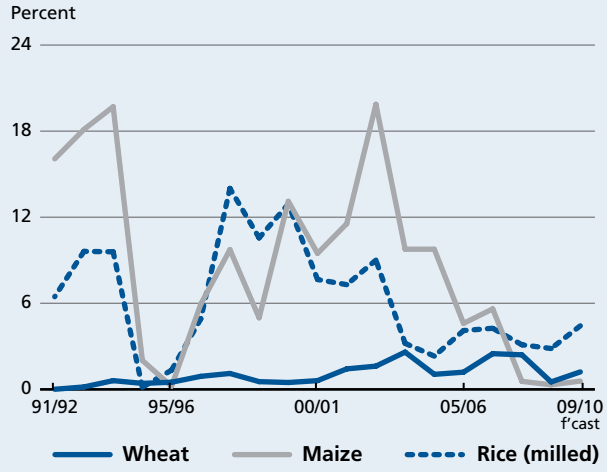


Figure 10. World grain calorie prices and stock-to-use ratio

Figure 11. China's cereal export shares



Source: USDA Foreign Agricultural Service - Production Supply and Distribution)

and the reason is clear from Figures 8 and 11. Around that time China exported massive amounts of cereal stocks. In particular, as Figure 11 shows, China exported an unusually large amount of maize from its huge accumulated stocks, as well as a very substantial amount of wheat, cushioning the market in the rest of the world. It did not do this in any other of the high price periods mentioned above.

Readers might be surprised at the claim that 1996 was a high price year for aggregate calories from the major grains. A glance at Figures 1 through 3 shows that the price of maize was actually higher in 1996 than any time more recently. The price of wheat was also high, though not quite as high as in early 2008.

The point of this discussion is that in the last few decades, periods in which the stocks to use ratio was near its minimum have been associated with a high price of calories, with the exception of one instance early in this decade when a price spike was prevented by unusually large exports from China. Given the recent low level of stocks of grain calories, the high price of aggregate calories is no surprise at all.

Note that this conclusion is sharply opposed to the argument that the price crisis was generated by speculators who entered grain markets with large amounts of cash and caused prices to spike through their speculative activity[13]. To increase price, speculation must have reduced consumption, causing a move up the consumer demand curve. (In the short run production is fixed, and speculation certainly did not cause consumption demand to shift to the right. No one was claiming the problem was that consumers were eating more than usual due to speculation.). To reduce consumption, with production predetermined in the short run, speculation must have increased stocks beyond equilibrium levels. The difficulty with the argument is that stocks of aggregate calories were at minimum levels relative to use. In other words, the facts of the market are at odds with the argument that speculation was a major disruptive influence. In fact, the market appears to have reacted to a

[13] Claims of speculative behaviour are highly heterogeneous and hence difficult to evaluate. For example, Caballero, Farhi and Gourinchas (2008) state that the crisis involving the crash of the real estate market "exacerbated the shortage of assets in the world economy, which triggered a partial recreation of the bubble in commodities and oil markets in particular."
On the other hand, the 2009 UNCTAD Trade and Development Report states (p. IV):
"It is true that deteriorating global economic prospects after September 2008 dampened demand for commodities; but the downturn in international commodity prices was first triggered by financial investors who started to unwind their relatively liquid positions in commodities when the value of other assets began to fall or became uncertain"
We further note that the quoted UNCTAD report (p. IV) apparently sees the above observation as evidence that "the signals emanating from commodity exchanges are getting to be less reliable as a basis for investment decisions and for supply and demand management by producers and consumers."

shortfall of aggregate grain calories much as it has done for at least the last four decades, including the last similar crisis in 1996, when there was no serious claim that speculation was a major disruptive element in need of tighter regulation.

Given that low aggregate stocks of calories have been a major factor in the price volatility of the last several years, it makes sense to focus on the reasons for the unexpectedly low level of stocks observed in 2007 and 2008. The next section briefly addresses this question.

WHY WERE AGGREGATE STOCKS LOW IN 2007/2008?

The first point to note is that rice stocks were not unusually low in 2007/2008. Wheat production was lower than anticipated, due to an unprecedented extension of a severe Australian drought and to production problems elsewhere. Maize production was high. However stocks were low (but not as low as observed in 1996 or in the early 1970s). One important reason is the large surge in diversion of maize to biofuels. The United States plans to increase biofuels use were clear several years earlier and no doubt influenced the decline in stocks and increase in prices starting early in the current decade. However, policy changes which increased the mandates and a surge in petroleum prices that encouraged processors to exceed the mandates, were important. Other shocks that helped run down global stocks were the unprecedented income surges in China and India, which fostered a rapid expansion in meat demand and in turn in the demand for maize (and a substitute in production, soybeans) as feed. To the extent that the extensions of these surges were unexpected, they caused unanticipated reductions in supplies available to consumers, causing prices to spike high enough to reduce consumption sufficiently to meet the shortfall that remained after accessible stocks had been depleted.

Ironically, the largest relative price surge was in the grain least subjected to recent shocks in production or demand, and the least involved in futures and options trading. Rice harvests were not unusually small, on aggregate. Rice demand is also least affected by increased income, as it has a low income elasticity as a food, and is not used significantly as a feed for animals. The shock to demand for rice was largely generated by demand to make up shortfalls in wheat available to consumers. Important factors in this wheat shortage include low harvests and substitution of wheat for maize diverted from animal feed to biofuels in the United States. As discussed elsewhere, (Wright, 2009) the subsequent surge in the price of rice was exacerbated by a panic among exporter governments which progressively reduced access to rice export markets in 2007/2008, initiated by the announcement by India in October 2007 of an export ban, as part of a plan to increase domestic rice consumption to make up for a disappointing wheat harvest. Panic meant the meagre global calorie stocks were not efficiently allocated to those most in need

CONCLUSION

The grain price spikes of the 2007/2008 are not unusual, if viewed in the context of the history of grain prices over the last several decades. Indeed, excluding the role of China in world cereal exports, the behaviour of calorie prices for maize, rice and wheat during 2007/2008 are not qualitatively different from those of the early 1970s and 1996/1997: the upwards price spikes occurred systematically in periods of unusually low levels of aggregate stocks. The data show no evidence of a new market regime or of perverse effects from international financial speculation. Trends in demand due to income effects from China and India, and from biofuel mandates exacerbated by price increases in petroleum prices all have their part in explaining low stocks during 2007/2008. Consistent with recent empirical estimates of low consumption demand price elasticities for major grain, the high prices of 2007/2008 reflect the magnified effects of low harvests and unexpected shocks related to biofuels demand, in the context of nearly irreducibly low levels of stocks. Furthermore, export restrictions rendered the small remaining discretionary stocks less effective in stabilizing the market as a whole.

For the long run prospect of food prices, identification of the implications for price behaviour of production and demand trends, including biofuels demands, poses delicate methodological challenges for further research. Generation of improved data on production, consumption, prices and stocks is equally important. The good news is that the available evidence offers no reason to embark on the more daunting and hazardous task of developing regulatory or other policies to confront a purported new and different regime in global grain markets. Regulatory efforts can instead be focused on the obvious problems in global financial markets.

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TROPICAL FRUITS

REVIEW OF RECENT WORLD MARKET SITUATION FOR BANANAS AND TROPICAL FRUITS

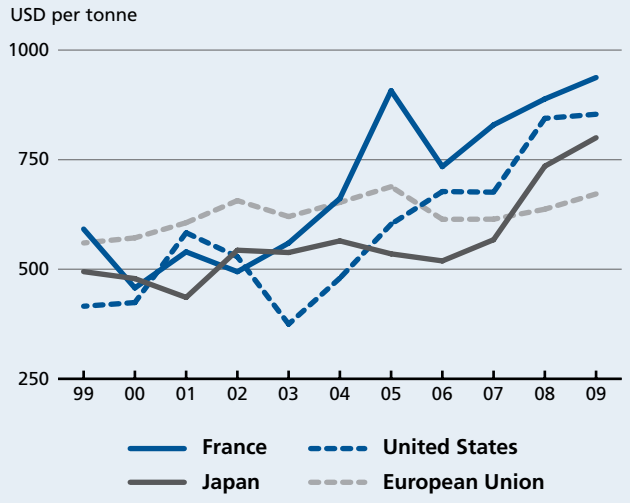
(This note is based on the paper titled "Current Market Situation For Bananas And Tropical Fruits" Prepared For Joint Meeting Of The Fourth Session Of The Sub Group On Bananas And The Fifth Session Of The Sub-Group On Tropical Fruits (to be held in Rome, 9 – 11 December 2009). The full paper along with other Documents presented at the meeting are available at: http://www.fao.org/unfao/bodies/CCP/ba-tf/2009/index_en.htm)

BANANA TRADE AND PRICES

Trade expanded despite economic slowdown

World banana exports are estimated to have risen by one percent to 14.6 million tonnes in 2008. The annual growth rate was slightly below the 20 year average trend and reflected a minor change in the pattern of trade that affected volumes. The marginal expansion in global trade was underpinned by an overall increase in supplies from every region, except the Caribbean where exports continued to contract. Imports by Japan and China rose strongly in 2008 (12.6 and 9.2 percent, respectively), and although the increase in shipments to the United States and the European Union was somewhat below trend, growth remained fairly robust at a respective 3.5 and 1.4 percent. The apparent resilience of import demand to economic recession, especially in countries where the downturn has been severe, is largely on account of competitively priced bananas and tropical fruits *vis-à-vis* temperate and other substitute fruits and the fact that expenditures on fruits generally form only a small percentage of overall household incomes in such countries.

Banana import prices



In **Latin America**, the supply of bananas from **Ecuador**, the world's largest banana exporting country, increased to 4.7 million tonnes in 2008. Unseasonable weather conditions were not conducive towards crop development, but firm support prices fostered an expansion in plantings. The official minimum price paid to producers was raised to USD 4.7 per box in 2008 up almost USD 1 from the previous year. In July 2009, a price of USD 5.40 was set by authorities, much to the consternation of traders, as the increase coincided with falling market prices in the key import destinations of Europe and the Russian Federation. Export volumes from **Colombia** also increased in 2008 despite declining competitiveness as a result of the depreciation of the United States Dollars ag

ainst the Colombian Peso. In **Honduras**, expanding exports continue to underpin the resurgence of the sector, in the wake of severe damage caused by Hurricane Felix in 2006. Although tropical storms in early June afflicted some banana plantations in **Guatemala**, weather conditions were generally favourable towards yields and prompted exports to rise by 2 percent in 2008. By contrast, adverse weather resulted in a reversal of productivity gains, registered in **Costa Rica** and **Panama** in recent years**,** causing exports to plummet by more than 9 and 16 percent, respectively.

In 2007, a series of tropical storms and hurricanes also affected banana crops in the **Caribbean**, resulting in a disruption to tradable supplies in the following year. The most devastating of which was Hurricane Dean, a powerful cyclone that left a trail of destruction in **Dominica**, **Guadalupe**, **Martinique** and **St Lucia**. Subsequently, exports did not return to normal levels until mid-2008. A succession of severe weather events including Hurricane Dean in **Jamaica** and flooding and wind damage from tropical storms Olga and Gustav virtually wiped out export potential for the country in 2008.

The **Asian** banana market witnessed some notable developments in 2008. **India**, the largest banana producer in the world, has been exploring the possibility of exporting to the European Union and some trial shipments were conducted in 2008. In the **Philippines**, the largest exporter of bananas in the region, shipments declined by 1.1 percent to 2.19 million tonnes. Access to the lucrative Australian banana market was further stalled as a Senate Committee recommended that import permits for Philippine bananas not be granted until phytosanitary risk management measures and work plans to be undertaken by the Philippines were independently scrutinized. A larger fall in shipments (13 percent) was recorded by **China**, but from a significantly

smaller base volume. Banana production has been growing rapidly in China, mostly to meet the needs of the domestic market, but if the current pace were to continue, there could be negative implications for future exports from the Philippines, which today account for some 85 percent of China's total banana deliveries. In **Africa**, exports in 2008 from **Cameroon** recovered from the weather affected harvest of 2007, but those from **Côte d'Ivoire** declined by 9 percent.

Banana prices continue firming in spite of the economic slowdown

Regarding **prices**, average import quotations for bananas in 2008, measured in United Nations Dollars terms, were higher in most countries compared with 2007. The upward momentum was in line with the pervasive increase in the prices of agricultural commodities observed in 2007 to mid-2008. However, banana prices remained strong throughout the year and well into 2009 despite the global economic recession. High import prices of bananas were due to the combined effects of higher input costs, greater freight charges, a weaker United States Dollar, and in Asia, a tighter supply situation due to lower exports from the Philippines.

At the retail level, prices in Europe reached a five-year high in April 2008 when the price reported in France reached EUR 1.88 per kg, but the seasonal downturn, which usually occurs in the second half of the year as demand for bananas in summer falls, reduced the average for the year to EUR 1.69/kg. Nevertheless, in United States Dollar terms, the average price of 2.48 per kg in 2008 was the highest in decades. The upward trend in prices has continued well into 2009, and prices look set to register a successive record.

TROPICAL FRUITS

Tropical fruits are important to developing countries from both a nutritional and export-revenue perspective. They are cultivated widely in the tropics at commercial and subsistence levels and until the 1970s, were mostly utilized for domestic consumption. These fruits are relatively cheap and provide a ready source of vitamins and minerals. In recent years trade volumes have expanded dramatically, as developing countries increasingly regard tropical fruits as an attractive option for diversification away from traditional export crops, which have experienced downward trends in prices. However, exports to major markets are required to comply with internationally certifiable production, food safety and quality standards, which can be very stringent and hence costly.

Production remained steady

World production of tropical fruits was estimated at over 82.7 million tonnes in 2008, slightly more than produced in the previous year. **Mango** dominatated global output with a share of almost 40 percent. World production of **pineapples** comprised about 25 percent, followed by **papaya** at 10 percent and **avocado** at 4 percent. The **minor tropical fruits**, i.e. those that are generally traded in smaller volumes, such as lychees or litchis, durian, rambuttan, guavas and passion fruit, recorded a combined output of 17.8 million tonnes in 2008 or roughly 22 percent of all tropical fruit production.

Asia is by far the largest producing region for tropical fruits, followed by Latin America and the Caribbean, Africa and Oceania. In 2008, Asia was the most important producer of **mangoes**, accounting for 74 percent of world production. Latin America and the Caribbean had a share of 16 percent, Africa 10 percent, and the balance was produced in Oceania. **Pineapple** output in 2008 was also governed by Asia with a share of 49 percent of global production, followed again by Latin America and the Caribbean (38 percent) and Africa (12 percent). The Latin America and the Caribbean region accounted for over two-thirds of world **avocado** production and 39 percent of all **papaya** output.

Data on **minor tropical fruits** remain scarce, but an assessment has been made from returns made by some producing countries, as well as industry sources. Of the estimated 17.8 million tonnes of minor tropical fruits produced in 2008, **guava** accounted for 27.5 percent with an output of 4.9 million tonnes, **lychees** 2.8 million tonnes, **longan** 2.4 million tonnes, **durian** 1.9 million tonnes, **rambuttan** 1.7 million tonnes and **passion fruit** nearly 1 million tonnes.

Only a small portion of production is traded but exports have increased

About 90 percent of the tropical fruits produced globally are consumed in producing countries themselves, exchanged on formal and informal markets. Some 10 percent is traded internationally; 5 percent as fresh fruits and a similar proportion traded as processed products. The overall contribution to farm/rural household incomes is significant with the value of production of tropical fruits estimated at USD 43.7 billion in 2008.

Although internationally traded fresh tropical fruit produce represents only a small proportion of the total volume produced, quantities are relatively large compared with temperate fruits, and export values are significant. In 2008, the total value of international trade of fresh tropical

fruits was USD 4.5 billion, compared with USD 7.5 billion for bananas, USD 6.2 billion for apples, USD 3.3 billion for oranges and USD 2.2 billion for pears. Processed tropical fruit transactions were valued at USD 1.9 in 2008.

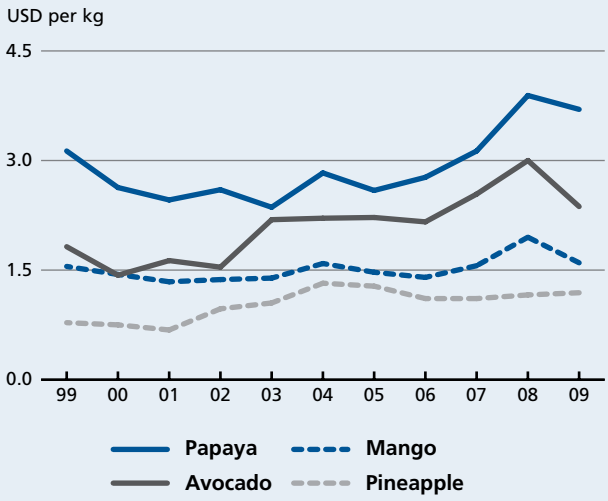
Revenue data for **exports** and re-exports in 2008 indicate a 1.5 percent increase in fresh tropical fruits, with a moderate increase of 3 percent registered for mangos and papayas and a small increase of 2 percent for pineapples. The surge in exports of MD-2 pineapples from Costa Rica, which peaked at an unprecedented 1.1 million tonnes in 2006, has underpinned the growth in fresh pineapple trade, but has since slowed down in 2008. Exports of avocadoes on the other hand declined by around 5 percent to 623 500 tonnes. Exports of minor fruits registered a relatively strong growth of over 3 percent in 2008, as regional demand in Asia remained steadfast in spite of the economic recession.

The United States is the largest **importer** of fresh tropical fruits followed by the European Union, Japan and China. The United States and the European Union together accounted in similar proportion for some 75 percent of world imports of pineapple, mango, papaya and avocado in 2008. Global inflows of minor tropical fruits on the other hand were mostly destined for China, Malaysia and Singapore, as demand for these fruits tends to be concentrated in Asia.

Prices followed a rising trend in recent years

Price information varies widely depending on quality and origin. In the United Kingdom, annual average wholesale prices for tropical fruits expressed in United States Dollars have increased in 2008, albeit at varying degrees, underpinned by strong demand. However, reported prices for 2009 indicate a decline relative to 2008, except for pineapples. For instance, the decline in the price of avocado over January to September 2009 was 21 percent, mango and papaya by 18 and 5 percent, respectively, while pineapple prices increased by 2.4 percent. Such price developments are in stark contrast to the period between 2005 and 2008, when avocado prices rose by 35 percent, while papaya and mango prices increased by 50 and 32.5 percent, respectively. Prices for pineapples increased substantially in the middle of the decade, before declining by a cumulative 9 percent by 2008, reflecting the decline in supplies of smooth cayenne from Africa and an over reaction of MD2 producers to the dramatic growth in demand.

UK: Wholesale Price of Selected Tropical Fruits



Statistical appendix

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

DISCLAIMER

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

Table A1. Cereal statistics *(million tonnes)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**973.7**	**973.6**	**140.2**	**129.6**	**41.5**	**43.7**	**1 041.5**	**1 057.4**	**306.2**	**308.4**
Bangladesh	32.7	32.0	3.3	2.7	-	-	34.5	34.9	6.9	6.6
China	420.9	417.3	8.6	9.2	1.1	2.9	407.6	413.4	188.5	198.7
India	216.9	200.3	0.2	0.8	4.0	4.0	206.8	208.6	41.7	30.3
Indonesia	54.3	57.3	5.6	5.5	0.6	1.1	57.3	59.7	8.9	11.0
Iran, Islamic Republic of	14.7	18.3	14.8	9.7	1.5	0.5	27.0	27.3	3.9	4.1
Iraq	2.1	2.2	4.9	5.2	-	-	7.5	7.7	2.5	2.2
Japan	9.1	8.8	25.4	25.6	0.6	0.6	34.3	34.1	3.9	3.8
Kazakhstan	18.6	19.8	0.2	-	6.2	6.6	11.5	11.6	4.5	6.1
Korea, Republic of	5.2	5.3	11.5	12.0	0.1	0.2	16.8	16.5	2.3	2.6
Myanmar	20.7	21.3	0.1	0.1	1.2	1.4	20.3	20.5	5.4	4.9
Pakistan	32.1	34.1	3.0	1.3	4.8	4.4	30.6	31.3	2.9	2.7
Philippines	18.1	18.0	5.3	5.2	-	0.4	22.2	23.4	4.5	4.1
Saudi Arabia	2.0	1.6	11.5	12.6	-	-	13.5	13.9	3.5	3.9
Thailand	25.4	25.6	2.0	1.9	9.4	10.3	16.9	17.1	5.7	5.7
Turkey	29.0	32.9	4.4	2.5	2.3	1.6	32.4	32.8	3.8	4.8
Viet Nam	29.5	29.8	2.3	2.3	6.3	6.3	26.0	26.3	5.3	4.8
AFRICA	**147.9**	**155.8**	**63.9**	**55.0**	**6.1**	**5.8**	**201.9**	**203.2**	**29.7**	**31.2**
Algeria	2.2	6.1	8.9	7.1	-	-	11.6	11.7	4.0	5.5
Egypt	21.4	20.7	15.2	13.0	0.5	0.4	33.6	34.0	6.4	5.8
Ethiopia	15.3	13.5	0.8	1.2	0.1	-	15.9	15.4	1.3	0.5
Morocco	5.2	10.5	5.6	3.1	0.2	0.2	10.8	12.2	2.0	3.2
Nigeria	28.5	28.6	5.5	5.3	0.5	0.4	32.9	33.5	1.3	1.3
South Africa	15.8	14.9	2.4	2.3	2.6	2.3	14.9	13.4	2.4	3.4
Sudan	5.5	5.3	1.7	1.5	0.3	0.2	7.3	7.2	1.8	1.2
CENTRAL AMERICA	**41.7**	**40.4**	**24.6**	**25.3**	**1.3**	**1.2**	**65.0**	**65.4**	**4.8**	**4.3**
Mexico	36.1	34.3	14.4	15.1	1.1	1.1	49.1	49.4	3.1	2.6
SOUTH AMERICA	**134.7**	**116.6**	**23.8**	**24.4**	**33.5**	**23.3**	**117.1**	**118.0**	**15.1**	**14.1**
Argentina	36.2	25.1	-	-	22.5	10.9	13.0	12.8	2.2	2.8
Brazil	75.6	67.1	8.7	8.4	7.9	8.9	68.6	68.7	8.5	6.7
Chile	3.0	3.0	2.9	3.3	-	-	6.1	6.3	0.4	0.4
Colombia	3.5	3.7	4.6	5.0	0.1	0.1	8.3	8.6	0.8	0.9
Peru	3.8	3.9	3.1	3.3	-	-	7.0	7.2	1.0	1.0
Venezuela	3.8	4.4	2.8	2.5	0.1	0.1	6.6	6.8	0.7	0.8
NORTH AMERICA	**457.0**	**461.1**	**9.3**	**8.9**	**101.8**	**104.8**	**344.3**	**358.2**	**79.0**	**82.7**
Canada	56.0	47.1	2.5	3.0	21.5	19.6	29.7	30.1	13.0	10.6
United States of America	401.0	414.0	6.8	5.9	80.3	85.1	314.6	328.1	65.9	72.1
EUROPE	**493.9**	**454.5**	**17.0**	**15.7**	**80.5**	**62.3**	**403.3**	**409.9**	**64.7**	**62.1**
European Union	315.4	292.2	13.1	11.8	30.2	23.5	281.7	282.5	41.9	39.9
Russian Federation	103.4	93.4	0.6	0.6	23.6	20.6	72.8	76.2	13.2	10.3
Serbia	9.0	9.1	-	-	1.7	1.9	6.3	6.3	1.0	1.6
Ukraine	48.7	42.2	0.2	0.2	24.5	16.0	23.2	24.5	5.6	7.5
OCEANIA	**35.1**	**36.2**	**1.3**	**1.3**	**18.5**	**19.0**	**16.6**	**16.1**	**6.2**	**7.0**
Australia	34.2	35.3	0.2	0.2	18.5	19.0	14.6	14.0	5.9	6.7
WORLD	**2 284.1**	**2 238.1**	**280.2**	**260.2**	**283.2**	**260.2**	**2 189.6**	**2 228.2**	**505.6**	**509.8**
Developing countries	1 241.2	1 228.4	215.2	197.8	73.0	64.5	1 341.8	1 266.8	341.2	340.9
Developed countries	1 042.9	1 009.7	65.0	62.4	210.2	195.7	847.8	866.5	164.4	168.9
LIFDCs	948.2	943.3	93.5	81.9	16.2	18.2	990.7	1 008.3	287.2	286.0
LDCs	137.9	139.3	23.6	20.1	5.4	5.5	154.6	156.2	26.1	23.7

Table A2. Wheat statistics *(million tonnes)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**278.6**	**297.5**	**65.7**	**55.3**	**13.4**	**13.5**	**325.4**	**334.7**	**96.6**	**100.8**
Bangladesh	0.9	1.0	2.8	2.0	-	-	3.1	3.1	1.1	1.0
China	112.5	115.0	2.0	1.8	0.1	1.1	112.0	113.7	53.1	55.1
of which Taiwan Prov.	-	-	1.1	1.2	-	-	1.2	1.2	0.3	0.3
India	78.6	80.6	0.1	0.7	-	1.0	77.4	81.2	17.8	16.9
Indonesia	-	-	5.3	5.3	-	-	5.2	5.1	2.4	2.6
Iran, Islamic Republic of	9.8	13.0	8.5	4.0	1.5	0.5	15.7	16.3	3.0	3.2
Iraq	1.3	1.4	3.6	3.8	-	-	5.5	5.5	2.3	2.0
Japan	0.9	0.8	5.4	5.5	0.4	0.4	5.9	5.9	0.7	0.7
Kazakhstan	16.0	17.0	0.1	-	5.8	6.0	9.1	9.5	4.0	5.5
Korea, Republic of	-	-	3.5	3.9	0.1	0.1	3.3	3.5	0.4	0.5
Pakistan	21.5	24.0	3.0	1.3	2.0	1.8	23.0	23.6	1.1	1.0
Philippines	-	-	3.1	2.8	-	-	2.8	2.8	0.6	0.6
Saudi Arabia	1.7	1.2	1.3	1.9	-	-	2.8	2.9	1.6	1.8
Thailand	-	-	1.1	1.2	0.1	-	1.1	1.1	0.2	0.2
Turkey	17.8	20.5	3.5	1.8	2.3	1.5	19.1	19.9	1.7	2.6
AFRICA	**20.5**	**27.2**	**36.9**	**29.6**	**0.8**	**0.9**	**54.6**	**55.3**	**14.8**	**15.4**
Algeria	1.6	4.5	6.4	4.7	-	-	8.1	8.2	3.5	4.6
Egypt	8.0	8.8	9.9	8.0	-	-	16.2	16.6	4.0	4.2
Ethiopia	2.7	2.3	0.6	0.8	-	-	3.4	3.2	0.2	-
Morocco	3.7	6.5	3.7	1.5	0.2	0.2	7.1	7.4	1.6	2.0
Nigeria	0.1	0.1	3.6	3.4	0.1	0.1	3.2	3.4	0.3	0.3
South Africa	2.1	2.0	1.3	1.2	0.2	0.3	2.9	3.0	0.7	0.6
Tunisia	0.9	1.5	1.8	1.5	0.1	0.2	2.8	3.0	1.3	1.2
CENTRAL AMERICA	**4.0**	**4.1**	**7.0**	**7.1**	**1.1**	**1.1**	**10.0**	**10.2**	**0.7**	**0.8**
Cuba	-	-	0.8	0.8	-	-	0.8	0.8	-	-
Mexico	4.0	4.1	3.4	3.4	1.0	1.0	6.4	6.6	0.3	0.4
SOUTH AMERICA	**17.1**	**16.1**	**12.9**	**13.2**	**8.9**	**3.2**	**24.7**	**25.5**	**2.4**	**2.9**
Argentina	8.3	7.5	-	-	8.1	1.8	4.9	5.0	0.5	1.0
Brazil	5.9	5.0	6.7	6.7	0.3	0.3	10.9	11.3	1.2	1.2
Chile	1.1	1.2	1.0	1.1	-	-	2.2	2.3	0.1	0.1
Colombia	-	-	1.3	1.3	-	-	1.3	1.3	0.1	0.1
Peru	0.2	0.2	1.5	1.6	-	-	1.7	1.8	0.1	0.2
Venezuela	-	-	1.5	1.6	-	-	1.6	1.7	0.1	0.1
NORTH AMERICA	**96.6**	**85.0**	**3.0**	**2.5**	**44.7**	**40.5**	**42.1**	**41.4**	**24.4**	**29.6**
Canada	28.6	24.6	-	-	17.8	16.0	7.9	8.2	6.6	6.1
United States of America	68.0	60.4	3.0	2.5	26.9	24.5	34.2	33.3	17.9	23.5
EUROPE	**242.9**	**225.7**	**10.0**	**8.6**	**56.8**	**43.8**	**183.0**	**190.2**	**29.5**	**29.7**
European Union	150.4	137.1	7.9	6.5	24.7	17.8	124.2	126.8	18.5	17.5
Russian Federation	61.2	61.0	0.1	0.1	18.7	18.0	38.1	44.1	7.5	6.5
Ukraine	24.2	20.5	0.1	0.1	12.6	7.5	12.5	10.9	2.2	4.3
OCEANIA	**21.7**	**23.0**	**0.6**	**0.6**	**13.5**	**14.0**	**7.7**	**7.9**	**4.0**	**4.2**
Australia	21.4	22.7	-	-	13.5	14.0	6.8	7.0	3.8	4.0
WORLD	**681.4**	**678.6**	**136.1**	**117.0**	**139.1**	**117.0**	**647.6**	**665.3**	**172.3**	**183.5**
Developing countries	290.4	313.2	108.1	91.7	17.7	11.9	378.5	388.7	105.6	109.7
Developed countries	391.0	365.4	28.0	25.3	121.4	105.1	269.1	276.6	66.7	73.8
LIFDCs	248.7	264.3	58.7	48.4	2.8	4.5	299.4	307.3	93.4	94.3
LDCs	9.0	11.1	14.2	10.9	0.1	0.1	22.4	23.0	4.9	3.9

Table A3. Coarse grain statistics *(million tonnes)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**278.8**	**269.6**	**60.6**	**59.4**	**4.0**	**5.0**	**322.6**	**322.8**	**91.9**	**93.3**
China	175.9	167.2	5.8	6.5	0.2	0.4	168.5	171.7	71.6	73.3
of which Taiwan Prov.	0.1	0.1	4.3	4.6	-	-	4.5	4.5	0.4	0.5
India	39.1	34.8	-	-	1.5	1.0	37.1	34.6	2.7	1.8
Indonesia	16.3	17.0	0.1	0.1	0.5	1.0	14.6	15.1	3.0	4.0
Iran, Islamic Republic of	2.9	3.2	5.0	4.5	-	-	8.0	7.8	0.5	0.4
Japan	0.2	0.2	19.3	19.4	-	-	20.0	19.9	1.6	1.5
Korea, D.P.R.	1.8	1.8	0.4	0.5	-	-	2.2	2.2	-	0.1
Korea, Republic of	0.4	0.4	7.7	7.7	-	-	8.6	8.0	1.1	1.1
Malaysia	0.1	0.1	2.6	2.6	-	-	2.7	2.7	0.3	0.3
Pakistan	3.7	3.7	-	-	-	-	3.7	3.8	1.1	1.0
Philippines	6.9	7.1	0.4	0.1	-	0.4	7.1	7.1	1.2	1.0
Saudi Arabia	0.3	0.4	9.2	9.4	-	-	9.6	9.8	1.9	1.9
Thailand	4.5	4.5	0.5	0.4	0.7	0.8	4.2	4.1	0.2	0.2
Turkey	10.8	12.0	0.8	0.5	-	0.1	12.6	12.2	2.1	2.2
Viet Nam	3.7	3.7	0.7	0.7	-	-	4.4	4.4	1.0	1.0
AFRICA	**110.7**	**112.6**	**17.4**	**16.1**	**4.8**	**4.5**	**122.3**	**122.5**	**11.4**	**12.8**
Algeria	0.6	1.6	2.4	2.4	-	-	3.4	3.4	0.5	1.0
Egypt	8.4	8.0	5.2	5.0	-	-	13.2	13.3	0.9	0.6
Ethiopia	12.7	11.2	0.3	0.4	0.1	-	12.5	12.2	1.2	0.5
Kenya	2.3	2.3	1.5	1.4	-	-	3.7	3.7	0.2	0.2
Morocco	1.5	3.9	1.9	1.6	-	-	3.7	4.8	0.4	1.2
Nigeria	26.0	26.0	0.1	0.1	0.4	0.3	25.5	25.8	0.8	0.8
South Africa	13.7	12.8	0.1	0.2	2.4	2.0	11.1	9.6	1.8	2.8
Sudan	4.9	4.7	0.3	0.5	0.3	0.2	5.3	5.2	0.5	0.3
Tanzania, United Rep. of	4.6	4.3	0.1	0.1	0.1	0.1	4.4	4.4	0.5	0.4
CENTRAL AMERICA	**36.1**	**34.5**	**15.2**	**15.8**	**0.1**	**0.1**	**50.9**	**51.2**	**3.7**	**3.1**
Mexico	31.9	30.1	10.4	11.1	0.1	0.1	41.9	42.0	2.8	2.2
SOUTH AMERICA	**101.7**	**83.8**	**9.6**	**9.8**	**22.2**	**18.0**	**77.5**	**77.2**	**11.5**	**9.7**
Argentina	27.0	16.7	-	-	13.9	8.6	7.6	7.3	1.6	1.7
Brazil	61.6	53.7	1.3	0.9	6.9	8.1	49.6	49.1	7.2	5.3
Chile	1.8	1.8	1.7	2.1	-	-	3.7	3.9	0.3	0.3
Colombia	1.9	1.8	3.1	3.6	-	-	5.2	5.4	0.6	0.6
Peru	1.7	1.7	1.5	1.7	-	-	3.3	3.4	0.5	0.5
Venezuela	2.8	3.5	1.2	0.8	-	-	4.0	4.2	0.4	0.5
NORTH AMERICA	**353.8**	**369.1**	**5.3**	**5.3**	**54.0**	**61.2**	**297.8**	**312.3**	**53.5**	**51.7**
Canada	27.4	22.5	2.2	2.6	3.7	3.6	21.5	21.6	6.4	4.5
United States of America	326.5	346.6	3.1	2.7	50.3	57.6	276.3	290.6	47.1	47.2
EUROPE	**248.6**	**226.0**	**5.3**	**5.3**	**23.5**	**18.2**	**216.2**	**215.5**	**34.7**	**31.8**
European Union	163.2	153.0	4.0	4.0	5.5	5.5	154.6	152.6	23.0	21.8
Russian Federation	41.7	31.7	0.2	0.2	4.8	2.5	34.0	31.3	5.7	3.8
Serbia	7.0	6.9	-	-	1.2	1.6	4.6	4.5	0.8	1.3
Ukraine	24.4	21.6	-	-	11.9	8.5	10.5	13.4	3.4	3.2
OCEANIA	**13.4**	**13.1**	**0.3**	**0.2**	**5.0**	**5.0**	**8.4**	**7.6**	**2.2**	**2.7**
Australia	12.8	12.5	-	-	5.0	5.0	7.6	6.9	2.1	2.6
WORLD	**1 143.1**	**1 108.7**	**113.7**	**112.0**	**113.7**	**112.0**	**1 095.7**	**1 109.0**	**208.9**	**205.2**
Developing countries	508.5	482.5	81.6	79.8	28.5	25.0	535.6	443.0	114.4	113.9
Developed countries	634.6	626.2	32.0	32.1	85.2	87.0	560.1	571.0	94.5	91.3
LIFDCs	350.3	341.0	19.5	17.6	4.8	5.3	348.3	352.2	91.1	92.2
LDCs	59.9	58.8	3.0	2.7	2.5	2.5	59.7	59.7	7.3	6.7

Table A4. Maize statistics *(million tonnes)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**233.6**	**225.2**	**42.4**	**42.7**	**3.6**	**4.3**	**257.9**	**262.2**	**84.2**	**85.8**
China	166.0	158.0	4.2	4.5	0.2	0.4	156.9	160.4	70.1	71.9
of which Taiwan Prov.	-	-	4.1	4.4	-	-	4.3	4.3	0.4	0.5
India	19.3	17.6	-	-	1.5	1.0	16.9	17.5	2.4	1.5
Indonesia	16.3	17.0	0.1	0.1	0.5	1.0	14.5	15.1	3.0	4.0
Iran, Islamic Republic of	1.0	1.2	3.0	2.8	-	-	4.1	4.0	0.2	0.2
Japan	-	-	16.4	16.5	-	-	16.6	16.6	1.0	1.0
Korea, D.P.R.	1.7	1.7	0.4	0.5	-	-	2.1	2.1	-	0.1
Korea, Republic of	0.1	0.1	7.5	7.6	-	-	8.1	7.6	1.0	1.0
Malaysia	0.1	0.1	2.6	2.6	-	-	2.7	2.7	0.3	0.3
Pakistan	3.2	3.2	-	-	-	-	3.2	3.3	1.1	1.0
Philippines	6.9	7.1	0.3	0.1	-	0.4	7.0	7.0	1.2	1.0
Thailand	4.2	4.3	0.5	0.4	0.7	0.8	3.9	3.9	0.2	0.2
Turkey	4.3	4.2	0.5	0.3	-	-	4.6	4.6	0.7	0.6
Viet Nam	3.7	3.7	0.7	0.7	-	-	4.4	4.4	1.0	1.0
AFRICA	**56.5**	**56.7**	**14.5**	**14.1**	**3.6**	**3.6**	**66.5**	**65.8**	**6.5**	**7.6**
Algeria	-	-	2.0	2.3	-	-	2.1	2.2	0.2	0.3
Egypt	7.4	7.0	5.2	5.0	-	-	12.2	12.3	0.9	0.6
Ethiopia	4.4	3.9	0.2	0.2	-	-	4.5	4.3	0.2	0.1
Kenya	2.2	2.2	1.3	1.4	-	-	3.5	3.5	0.1	0.1
Morocco	0.2	0.2	1.6	1.6	-	-	1.9	1.9	0.3	0.2
Nigeria	7.5	7.5	0.1	0.1	0.2	0.2	7.3	7.4	0.4	0.4
South Africa	13.2	12.3	-	0.1	2.3	2.0	10.5	9.0	1.6	2.6
Tanzania, United Rep. of	3.6	3.5	0.1	0.1	0.1	0.1	3.4	3.5	0.3	0.3
CENTRAL AMERICA	**28.0**	**27.0**	**12.6**	**13.2**	**0.1**	**0.1**	**40.7**	**40.8**	**2.8**	**2.3**
Mexico	24.3	23.0	7.9	8.5	0.1	0.1	32.1	32.1	2.0	1.5
SOUTH AMERICA	**91.8**	**74.8**	**8.2**	**8.4**	**20.2**	**16.5**	**68.8**	**68.6**	**10.4**	**8.5**
Argentina	22.0	12.7	-	-	12.1	7.4	5.0	4.7	1.0	1.0
Brazil	59.0	51.1	0.9	0.5	6.9	8.0	46.6	46.1	7.0	5.0
Chile	1.4	1.3	1.4	1.7	-	-	2.9	3.0	0.2	0.2
Colombia	1.7	1.7	2.8	3.3	-	-	4.7	4.9	0.5	0.6
Peru	1.5	1.5	1.4	1.6	-	-	3.0	3.0	0.5	0.5
Venezuela	2.4	3.0	1.2	0.8	-	-	3.6	3.7	0.4	0.5
NORTH AMERICA	**318.0**	**340.4**	**2.5**	**2.9**	**46.5**	**53.8**	**270.9**	**288.3**	**44.4**	**43.9**
Canada	10.6	9.7	2.1	2.6	0.4	0.3	11.6	11.9	1.9	1.4
United States of America	307.4	330.7	0.4	0.4	46.1	53.5	259.3	276.4	42.5	42.5
EUROPE	**91.2**	**80.5**	**3.8**	**4.1**	**9.7**	**7.2**	**81.1**	**78.4**	**11.2**	**9.8**
European Union	63.2	56.1	3.0	3.4	1.7	1.6	62.5	59.9	8.0	6.0
Russian Federation	6.7	5.0	0.2	0.2	1.3	1.0	5.9	4.1	0.4	0.5
Serbia	6.6	6.5	-	-	1.2	1.6	4.2	4.0	0.8	1.3
Ukraine	10.0	7.9	-	-	5.5	3.0	3.4	4.8	1.2	1.3
OCEANIA	**0.6**	**0.5**	**0.1**	**0.1**	**0.1**	**-**	**0.5**	**0.5**	**0.1**	**0.1**
WORLD	**819.6**	**805.2**	**84.1**	**85.5**	**84.0**	**85.5**	**786.3**	**804.5**	**159.7**	**158.1**
Developing countries	395.1	370.0	60.4	60.7	25.3	22.5	403.9	314.1	101.2	100.5
Developed countries	424.5	435.2	23.8	24.8	58.7	63.0	382.4	395.5	58.4	57.5
LIFDCs	263.9	256.8	14.7	13.9	3.6	4.4	258.7	264.8	84.1	85.6
LDCs	27.9	29.0	2.2	1.9	1.5	1.8	28.2	28.7	3.6	4.1

Table A5. Barley statistics *(million tonnes)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**17.0**	**19.2**	**16.0**	**14.8**	**0.3**	**0.6**	**33.7**	**33.2**	**6.0**	**6.1**
China	3.3	2.6	1.4	1.8	-	-	4.7	4.4	0.7	0.7
India	1.2	1.5	-	-	-	-	1.2	1.5	-	-
Iran, Islamic Republic of	1.9	2.0	2.0	1.7	-	-	3.9	3.8	0.3	0.2
Iraq	0.4	0.5	0.1	0.1	-	-	0.5	0.6	-	-
Japan	0.2	0.2	1.4	1.5	-	-	1.7	1.7	0.4	0.4
Kazakhstan	1.8	2.0	0.1	-	0.3	0.5	1.7	1.4	0.4	0.5
Saudi Arabia	-	-	7.3	7.4	-	-	7.4	7.4	1.8	1.8
Syria	0.2	1.0	1.7	0.6	-	-	1.4	1.6	0.6	0.6
Turkey	5.9	7.2	0.3	0.2	-	0.1	7.4	7.1	1.3	1.5
AFRICA	**4.2**	**7.9**	**1.8**	**1.0**	**-**	**-**	**6.5**	**7.7**	**1.0**	**2.2**
Algeria	0.6	1.5	0.4	0.1	-	-	1.2	1.2	0.3	0.7
Ethiopia	1.6	1.5	-	-	-	-	1.6	1.6	0.2	0.1
Libya	0.1	0.1	0.4	0.4	-	-	0.4	0.4	-	-
Morocco	1.3	3.7	0.4	0.1	-	-	1.8	2.9	0.1	1.0
Tunisia	0.3	0.7	0.6	0.4	-	-	1.0	1.1	0.2	0.2
CENTRAL AMERICA	**0.8**	**0.8**	**0.2**	**0.3**	**-**	**-**	**1.0**	**1.1**	**0.1**	**0.1**
Mexico	0.8	0.8	0.2	0.3	-	-	1.0	1.1	0.1	0.1
SOUTH AMERICA	**2.7**	**2.6**	**0.8**	**0.7**	**1.0**	**0.8**	**2.4**	**2.4**	**0.3**	**0.5**
Argentina	1.7	1.6	-	-	0.9	0.7	0.7	0.8	0.3	0.4
NORTH AMERICA	**17.0**	**14.1**	**0.7**	**0.6**	**1.7**	**2.0**	**13.3**	**12.7**	**4.8**	**4.2**
Canada	11.8	9.2	-	-	1.4	1.5	8.2	7.9	2.8	1.8
United States of America	5.2	5.0	0.6	0.6	0.3	0.5	5.1	4.8	1.9	2.4
EUROPE	**104.1**	**93.4**	**0.6**	**0.6**	**13.4**	**10.6**	**83.3**	**84.7**	**16.9**	**15.6**
Belarus	2.0	2.0	-	-	-	-	1.9	2.0	0.3	0.3
European Union	65.6	61.7	0.3	0.3	3.5	3.5	58.3	58.0	10.5	11.0
Russian Federation	23.1	16.2	0.1	0.1	3.5	1.5	16.7	16.3	4.0	2.5
Ukraine	11.8	11.7	-	-	6.3	5.5	4.7	6.5	1.8	1.5
OCEANIA	**7.2**	**8.2**	**-**	**-**	**3.3**	**4.0**	**3.7**	**4.1**	**1.2**	**1.8**
Australia	6.8	7.9	-	-	3.3	4.0	3.3	3.7	1.2	1.8
WORLD	**153.0**	**146.2**	**20.1**	**18.0**	**19.7**	**18.0**	**143.9**	**145.9**	**30.3**	**30.6**
Developing countries	21.5	26.9	16.8	14.8	1.0	0.9	38.4	39.4	6.3	7.7
Developed countries	131.6	119.3	3.3	3.2	18.7	17.1	105.5	106.5	24.0	22.8
LIFDCs	10.1	13.0	3.6	2.5	-	-	13.3	14.8	1.9	2.7
LDCs	2.1	2.1	-	-	-	-	2.1	2.2	0.2	0.1

Table A6. Sorghum statistics *(million tonnes)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**10.1**	**10.8**	**1.6**	**1.4**	**0.1**	**0.1**	**11.7**	**12.5**	**0.9**	**0.7**
China	1.8	1.7	0.1	0.1	-	-	2.0	1.9	0.3	0.1
India	7.3	8.0	-	-	-	-	7.3	8.0	0.2	0.2
Japan	-	-	1.3	1.2	-	-	1.3	1.3	0.2	0.1
AFRICA	**26.4**	**25.4**	**1.0**	**0.9**	**0.8**	**0.6**	**26.5**	**26.2**	**2.0**	**1.5**
Burkina Faso	2.0	1.7	-	-	0.1	0.1	1.8	1.7	0.2	0.1
Ethiopia	3.0	2.5	0.1	0.2	-	-	2.9	2.8	0.3	0.2
Nigeria	9.3	9.3	-	-	0.1	0.1	9.3	9.3	0.1	0.1
Sudan	4.2	4.0	0.3	0.4	0.3	0.2	4.4	4.4	0.3	0.2
CENTRAL AMERICA	**7.1**	**6.7**	**2.3**	**2.2**	**-**	**-**	**9.1**	**9.1**	**0.8**	**0.7**
Mexico	6.6	6.2	2.3	2.2	-	-	8.6	8.6	0.7	0.6
SOUTH AMERICA	**5.9**	**5.1**	**0.4**	**0.5**	**0.9**	**0.7**	**4.8**	**4.7**	**0.6**	**0.7**
Argentina	2.9	2.0	-	-	0.9	0.5	1.5	1.4	0.3	0.3
Brazil	2.0	1.9	-	-	-	0.1	1.9	1.8	0.2	0.2
Venezuela	0.4	0.5	-	-	-	-	0.4	0.5	-	-
NORTH AMERICA	**12.0**	**9.2**	**-**	**-**	**3.8**	**3.5**	**8.3**	**5.9**	**1.4**	**1.2**
United States of America	12.0	9.2	-	-	3.8	3.5	8.3	5.9	1.4	1.2
EUROPE	**0.6**	**0.7**	**0.5**	**0.3**	**-**	**-**	**1.3**	**1.2**	**0.6**	**0.4**
European Union	0.6	0.6	0.4	0.2	-	-	1.2	1.0	0.6	0.4
OCEANIA	**3.8**	**2.3**	**0.2**	**0.1**	**1.4**	**0.7**	**2.5**	**1.2**	**0.7**	**0.6**
Australia	3.8	2.3	-	-	1.4	0.7	2.3	1.1	0.7	0.6
WORLD	**65.8**	**60.2**	**6.0**	**5.5**	**6.9**	**5.5**	**64.2**	**60.7**	**7.0**	**5.8**
Developing countries	49.2	47.7	3.9	3.8	1.7	1.3	50.5	50.9	4.1	3.3
Developed countries	16.6	12.5	2.1	1.7	5.2	4.2	13.6	9.9	2.9	2.4
LIFDCs	36.0	35.6	1.0	1.0	0.8	0.6	36.3	36.6	2.6	1.9
LDCs	15.3	14.3	0.8	0.8	0.7	0.5	15.3	15.1	1.9	1.4

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

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	18.1	14.4	0.6	0.5	-	-	19.2	14.9	0.7	0.7
AFRICA	23.6	22.6	0.1	0.1	0.4	0.3	22.8	22.8	2.0	1.5
CENTRAL AMERICA	0.1	0.1	0.1	0.1	-	-	0.2	0.2	-	-
SOUTH AMERICA	1.3	1.3	0.2	0.2	-	-	1.5	1.5	0.1	0.1
NORTH AMERICA	6.9	5.3	2.1	1.8	2.0	1.9	5.4	5.4	3.0	2.4
EUROPE	52.7	51.4	0.4	0.3	0.4	0.5	50.5	51.2	6.0	5.9
OCEANIA	1.9	2.0	-	-	0.2	0.3	1.7	1.8	0.2	0.2
WORLD	**104.6**	**97.1**	**3.5**	**3.0**	**3.0**	**3.0**	**101.3**	**97.9**	**11.9**	**10.8**

Table A8. Rice statistics *(million tonnes, milled equivalent)*

	Production		Imports		Exports		Total Utilization		Stocks ending in	
	2008 *estim.*	2009 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**416.4**	**406.6**	**13.9**	**14.8**	**24.1**	**25.2**	**393.5**	**399.9**	**117.7**	**114.2**
Bangladesh	31.3	30.5	0.4	0.6	-	-	30.8	31.3	5.8	5.6
China	132.5	135.1	0.8	0.9	0.9	1.5	127.0	128.0	63.7	70.3
of which Taiwan Prov.	1.1	1.0	0.2	0.2	0.1	0.1	1.1	1.1	0.1	0.1
India	99.2	85.0	0.1	0.1	2.5	2.0	92.2	92.8	21.2	11.5
Indonesia	38.0	40.2	0.2	0.1	-	0.1	37.6	39.5	3.5	4.4
Iran, Islamic Republic of	2.0	2.1	1.3	1.2	-	-	3.3	3.3	0.5	0.5
Iraq	0.2	0.1	1.1	1.2	-	-	1.2	1.2	0.1	0.1
Japan	8.0	7.8	0.7	0.7	0.2	0.2	8.4	8.3	1.6	1.6
Korea, D.P.R.	1.3	1.5	0.6	0.5	-	-	1.9	2.0	-	-
Korea, Republic of	4.8	4.9	0.3	0.3	-	0.2	4.9	4.9	0.9	1.1
Malaysia	1.5	1.6	0.9	0.9	-	-	2.4	2.5	0.2	0.2
Myanmar	19.2	19.8	0.1	-	0.8	1.0	19.2	19.4	5.3	4.8
Pakistan	7.0	6.4	-	-	2.8	2.6	3.8	3.8	0.7	0.7
Philippines	11.2	10.9	1.8	2.3	-	-	12.4	13.5	2.8	2.5
Saudi Arabia	-	-	1.0	1.3	-	-	1.0	1.2	0.1	0.3
Sri Lanka	2.6	2.5	-	0.1	-	-	2.5	2.5	0.3	0.3
Thailand	21.0	21.1	0.4	0.3	8.6	9.5	11.6	11.9	5.3	5.3
Viet Nam	25.8	26.0	0.5	0.5	6.3	6.3	20.5	20.7	3.9	3.4
AFRICA	**16.6**	**16.1**	**9.7**	**9.4**	**0.5**	**0.4**	**25.1**	**25.5**	**3.4**	**2.9**
Cote d'Ívoire	0.5	0.5	0.9	0.9	-	-	1.4	1.4	-	-
Egypt	5.0	4.0	0.1	-	0.5	0.4	4.2	4.1	1.5	1.0
Madagascar	2.7	2.8	0.1	0.1	-	-	2.8	2.9	0.2	0.2
Nigeria	2.5	2.6	1.8	1.8	-	-	4.3	4.4	0.2	0.2
Senegal	0.4	0.4	0.9	0.8	-	-	1.2	1.2	0.2	0.2
South Africa	-	-	0.9	0.9	-	-	0.9	0.8	-	-
Tanzania, United Rep. of	0.9	0.9	0.2	0.2	-	-	1.0	1.1	0.1	0.1
CENTRAL AMERICA	**1.6**	**1.7**	**2.3**	**2.3**	**-**	**-**	**4.0**	**4.0**	**0.4**	**0.4**
Cuba	0.3	0.3	0.6	0.5	-	-	0.9	0.9	-	-
Mexico	0.2	0.1	0.6	0.6	-	-	0.8	0.8	-	-
SOUTH AMERICA	**16.0**	**16.6**	**1.2**	**1.3**	**2.4**	**2.1**	**14.8**	**15.3**	**1.3**	**1.4**
Argentina	0.8	0.9	-	-	0.5	0.5	0.5	0.5	0.1	0.1
Brazil	8.1	8.4	0.7	0.8	0.7	0.5	8.1	8.3	0.2	0.3
Peru	1.9	2.0	0.1	-	-	-	1.9	2.0	0.3	0.3
Uruguay	0.9	0.9	-	-	0.8	0.7	0.1	0.1	0.2	0.1
NORTH AMERICA	**6.5**	**7.0**	**1.0**	**1.1**	**3.1**	**3.1**	**4.4**	**4.6**	**1.0**	**1.5**
Canada	-	-	0.3	0.3	-	-	0.3	0.3	0.1	0.1
United States of America	6.5	7.0	0.7	0.7	3.1	3.1	4.1	4.2	1.0	1.4
EUROPE	**2.4**	**2.8**	**1.7**	**1.8**	**0.2**	**0.3**	**4.0**	**4.2**	**0.5**	**0.6**
European Union	1.8	2.1	1.2	1.3	0.1	0.2	3.0	3.1	0.4	0.6
Russian Federation	0.5	0.7	0.3	0.2	0.1	0.1	0.7	0.8	-	-
OCEANIA	**-**	**0.1**	**0.5**	**0.5**	**0.1**	**0.1**	**0.5**	**0.5**	**-**	**-**
Australia	-	-	0.2	0.2	0.1	0.1	0.2	0.2	-	-
WORLD	**459.6**	**450.8**	**30.4**	**31.2**	**30.4**	**31.2**	**446.3**	**453.9**	**124.4**	**121.1**
Developing countries	442.3	432.7	25.5	26.2	26.8	27.6	427.7	435.1	121.2	117.3
Developed countries	17.4	18.1	4.9	5.0	3.6	3.6	18.6	18.9	3.2	3.8
LIFDCs	349.2	338.0	15.4	15.9	8.6	8.4	343.0	348.8	102.7	99.5
LDCs	69.1	69.4	6.4	6.4	2.8	2.9	72.5	73.6	13.9	13.2

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

	Wheat[1]			Coarse Grains[2]			Rice (milled basis)		
	2007/08	2008/09 estim.	2009/10 f'cast	2007/08	2008/09 estim.	2009/10 f'cast	2007/08	2008/09 estim.	2009/10 f'cast
	UNITED STATES (June/May)			**UNITED STATES**			**UNITED STATES** (Aug./July)		
Opening stocks	12.4	8.3	17.9	36.2	45.1	47.1	1.3	0.9	1.0
Production	55.8	68.0	60.4	350.9	326.5	346.6	6.3	6.5	7.0
Imports	2.5	3.0	2.5	3.5	3.1	2.7	0.8	0.6	0.7
Total Supply	**70.7**	**79.3**	**80.8**	**390.6**	**374.6**	**396.4**	**8.4**	**8.1**	**8.6**
Domestic use	28.4	34.2	33.3	275.6	276.3	290.6	4.1	4.1	4.1
Exports	34.0	27.3	24.0	70.0	51.2	58.6	3.3	3.0	3.1
Closing stocks	8.3	17.9	23.5	45.1	47.1	47.2	0.9	1.0	1.4
	CANADA (August/July)			**CANADA**			**THAILAND** (Nov./Oct.)[3]		
Opening stocks	6.8	4.4	6.6	3.7	4.1	6.4	4.4	4.2	5.3
Production	20.1	28.6	24.6	28.0	27.4	22.5	21.2	21.0	21.1
Imports	0.0	0.0	0.0	3.3	1.8	2.1	0.2	0.4	0.3
Total Supply	**26.9**	**33.0**	**31.2**	**35.0**	**33.3**	**31.0**	**25.7**	**25.5**	**26.7**
Domestic use	6.6	7.9	8.2	22.9	21.5	21.6	11.6	11.6	11.9
Exports	15.9	18.6	16.9	8.0	5.4	4.9	10.0	8.6	9.5
Closing stocks	4.4	6.6	6.1	4.1	6.4	4.5	4.2	5.3	5.3
	ARGENTINA (Dec./Nov.)			**ARGENTINA**			**INDIA** (Oct./Sept.)[3]		
Opening stocks	2.7	3.3	0.5	1.3	2.5	1.6	12.3	16.7	21.2
Production	16.3	8.3	7.5	26.6	27.0	16.7	96.7	99.2	85.0
Imports	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Supply	**19.1**	**11.6**	**8.0**	**28.0**	**29.5**	**18.3**	**109.0**	**115.9**	**106.3**
Domestic use	5.1	4.9	5.0	8.7	7.6	7.3	88.8	92.2	92.8
Exports	10.6	6.2	2.0	16.8	20.4	9.3	3.5	2.5	2.0
Closing stocks	3.3	0.5	1.0	2.5	1.6	1.7	16.7	21.2	11.5
	AUSTRALIA (Oct./Sept.)			**AUSTRALIA**			**PAKISTAN** (Nov./Oct.)[3]		
Opening stocks	4.1	3.7	3.8	2.0	1.6	2.1	0.4	0.4	0.7
Production	13.6	21.4	22.7	9.5	12.8	12.5	5.6	7.0	6.4
Imports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Supply	**17.7**	**25.1**	**26.5**	**11.5**	**14.4**	**14.6**	**6.0**	**7.3**	**7.1**
Domestic use	6.5	6.8	7.0	6.2	7.6	6.9	2.8	3.8	3.8
Exports	7.4	14.5	15.5	3.7	4.8	5.2	2.8	2.8	2.6
Closing stocks	3.7	3.8	4.0	1.6	2.1	2.6	0.4	0.7	0.7
	EU (July/June)			**EU**			**VIET NAM** (Nov./Oct.)[3]		
Opening stocks	15.0	9.5	18.5	20.3	15.8	23.0	4.8	4.4	3.9
Production	120.1	150.4	137.1	138.0	163.2	153.0	24.0	25.8	26.0
Imports	6.7	7.9	6.5	21.4	4.0	4.0	0.2	0.5	0.5
Total Supply	**141.9**	**167.8**	**162.1**	**179.6**	**183.0**	**179.9**	**29.0**	**30.7**	**30.4**
Domestic use	120.5	124.2	126.8	158.0	154.6	152.6	19.9	20.5	20.7
Exports	11.9	25.1	17.8	5.8	5.5	5.5	4.7	6.3	6.3
Closing stocks	9.5	18.5	17.5	15.8	23.0	21.8	4.4	3.9	3.4
	TOTAL OF ABOVE			**TOTAL OF ABOVE**			**TOTAL OF ABOVE**		
Opening stocks	41.0	29.2	47.2	63.5	69.0	80.1	23.1	26.5	32.1
Production	225.9	276.7	252.3	553.0	556.9	551.3	153.8	159.4	145.5
Imports	9.3	10.9	9.0	28.2	8.9	8.8	1.2	1.6	1.6
Total Supply	**276.2**	**316.8**	**308.5**	**644.6**	**634.8**	**640.2**	**178.1**	**187.5**	**179.1**
Domestic use	167.2	178.0	180.2	471.3	467.5	479.0	127.2	132.2	133.4
Exports	79.8	91.7	76.2	104.3	87.2	83.4	24.4	23.2	23.5
Closing stocks	29.2	47.2	52.2	69.0	80.1	77.8	26.5	32.1	22.3

[1] Trade data include wheat flour in wheat grain equivalent. For the **European Union** 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); **European Union** (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		
	2007/08	2008/09 estim.	2009/10 f'cast	2007/08	2008/09 estim.	2009/10 f'cast	2007/08	2008/09 estim.	2009/10 f'cast
ASIA	**121.5**	**125.5**	**126.1**	**60.4**	**64.5**	**64.6**	**2.6**	**2.3**	**2.6**
China	53.7	58.7	57.2	41.2	46.6	46.0	1.4	1.3	1.5
of which Taiwan Prov.	0.1	0.1	0.1	2.2	2.1	2.2	-	-	-
India	36.9	34.7	36.4	0.1	0.2	0.2	0.7	0.4	0.6
Indonesia	7.8	8.4	9.1	1.4	1.5	1.6	0.1	0.1	0.1
Iran, Islamic Republic of	0.7	0.8	0.8	0.9	0.8	0.8	-	-	-
Japan	0.3	0.3	0.3	6.7	5.9	6.2	-	-	-
Korea, Republic of	0.2	0.2	0.2	1.4	1.4	1.5	-	-	-
Malaysia	4.7	4.6	4.8	0.7	0.7	0.6	-	-	-
Pakistan	4.6	4.7	4.9	0.9	0.9	1.0	-	-	-
Thailand	0.8	0.8	0.8	1.7	1.6	1.7	-	0.1	-
Turkey	2.0	2.2	2.0	2.2	1.7	1.9	-	-	-
AFRICA	**16.3**	**16.8**	**16.2**	**2.4**	**2.5**	**2.3**	**0.7**	**0.8**	**0.6**
Nigeria	4.6	4.9	4.7	-	-	-	0.1	0.2	0.1
CENTRAL AMERICA	**1.1**	**1.2**	**1.2**	**6.1**	**5.5**	**5.7**	**0.1**	**0.1**	**0.1**
Mexico	0.7	0.8	0.8	5.5	4.9	5.1	-	-	-
SOUTH AMERICA	**126.9**	**104.7**	**131.2**	**3.9**	**3.0**	**1.5**	**46.4**	**40.8**	**39.2**
Argentina	52.0	36.4	53.8	2.7	1.8	0.4	14.5	6.2	9.1
Brazil	63.5	59.9	65.7	0.1	0.2	0.1	25.7	30.1	24.3
Paraguay	7.6	4.3	6.8	-	-	-	5.2	3.5	4.3
NORTH AMERICA	**96.3**	**107.0**	**113.8**	**2.3**	**2.1**	**2.1**	**41.4**	**47.1**	**46.6**
Canada	13.3	17.3	15.2	0.7	0.6	0.6	8.7	10.9	9.2
United States of America	83.0	89.7	98.6	1.6	1.5	1.5	32.7	36.2	37.5
EUROPE	**39.7**	**49.0**	**49.0**	**19.1**	**19.3**	**17.6**	**2.5**	**4.5**	**3.6**
European Union	24.9	27.2	29.3	18.3	18.6	16.5	0.8	0.6	0.6
Russian Federation	6.7	8.8	8.3	0.2	0.2	0.6	0.1	0.3	0.2
Ukraine	6.3	10.7	9.1	-	-	-	1.4	3.2	2.3
OCEANIA	**1.8**	**3.0**	**3.0**	**0.1**	**-**	**0.1**	**0.6**	**1.2**	**1.3**
Australia	1.4	2.6	2.6	-	-	-	0.5	1.1	1.2
WORLD	**403.5**	**407.1**	**440.5**	**94.2**	**97.1**	**93.7**	**94.3**	**96.9**	**94.1**
Developing countries	260.4	242.7	270.0	65.1	68.6	67.0	49.7	43.8	42.5
Developed countries	143.1	164.4	170.4	29.1	28.5	26.8	44.6	53.0	51.6
LIFDCs	125.0	129.4	129.9	44.8	50.3	49.7	3.1	3.0	3.4
LDCs	9.8	10.1	10.0	0.3	0.3	0.4	0.4	0.4	0.4

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

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

	Imports			Exports			Utilization		
	2007/08	2008/09 estim.	2009/10 f'cast	2007/08	2008/09 estim.	2009/10 f'cast	2007/08	2008/09 estim.	2009/10 f'cast
ASIA	**32.7**	**35.8**	**34.4**	**36.8**	**39.9**	**40.5**	**77.6**	**81.2**	**83.7**
Bangladesh	1.1	1.1	1.2	-	-	-	1.4	1.4	1.4
China	10.3	11.0	10.3	0.5	0.7	0.7	29.1	30.2	31.6
of which Taiwan Prov.	0.4	0.4	0.4	-	-	-	0.9	0.8	0.8
India	6.3	8.7	7.8	0.5	0.5	0.5	16.0	17.8	18.0
Indonesia	0.1	0.1	0.1	16.3	18.1	19.0	5.8	6.1	6.3
Iran	1.2	1.2	1.3	0.1	0.2	0.1	1.7	1.6	1.6
Japan	1.1	1.1	1.1	-	-	-	3.1	3.0	3.1
Korea, Republic of	0.8	0.8	0.8	-	-	-	1.1	1.1	1.2
Malaysia	1.2	1.5	1.4	16.3	17.4	17.2	4.1	4.2	4.3
Pakistan	2.0	2.1	2.2	0.1	0.2	0.1	3.5	3.5	3.6
Philippines	0.5	0.5	0.5	1.0	0.8	0.9	0.9	1.1	1.1
Singapore	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3
Turkey	1.2	1.3	1.3	0.2	0.4	0.4	2.4	2.3	2.3
AFRICA	**6.5**	**6.8**	**6.7**	**1.0**	**1.0**	**1.0**	**12.0**	**12.2**	**12.2**
Algeria	0.6	0.6	0.6	-	-	-	0.7	0.7	0.7
Egypt	1.2	1.6	1.4	0.1	0.1	0.1	1.7	1.8	1.8
Nigeria	0.3	0.4	0.4	-	0.1	0.1	2.0	2.0	2.0
South Africa	0.7	0.6	0.6	0.1	0.1	0.1	1.1	1.0	1.1
CENTRAL AMERICA	**2.4**	**2.2**	**2.4**	**0.6**	**0.6**	**0.6**	**4.6**	**4.5**	**4.5**
Mexico	1.2	1.2	1.3	0.1	0.1	0.1	3.0	2.9	2.9
SOUTH AMERICA	**2.4**	**2.1**	**2.2**	**11.2**	**9.5**	**9.1**	**11.0**	**11.7**	**12.3**
Argentina	0.2	0.1	-	7.3	6.1	5.8	1.5	1.6	1.9
Brazil	0.4	0.4	0.4	2.5	2.1	2.0	6.0	6.4	6.5
NORTH AMERICA	**3.8**	**4.0**	**4.1**	**5.8**	**5.7**	**6.1**	**17.6**	**16.6**	**17.6**
Canada	0.4	0.6	0.5	2.0	2.1	2.2	0.9	1.0	1.1
United States of America	3.4	3.5	3.5	3.7	3.6	3.9	16.7	15.6	16.5
EUROPE	**13.5**	**13.1**	**13.5**	**4.2**	**5.8**	**5.2**	**33.7**	**34.5**	**35.6**
European Union	10.6	10.8	11.1	1.9	2.2	2.2	28.1	29.0	30.0
Russian Federation	1.5	1.1	1.2	0.4	1.0	0.7	3.6	3.5	3.5
Ukraine	0.5	0.4	0.4	1.6	2.4	2.0	0.7	0.7	0.7
OCEANIA	**0.5**	**0.5**	**0.6**	**1.6**	**1.7**	**1.7**	**1.0**	**1.0**	**1.1**
Australia	0.3	0.4	0.4	0.6	0.6	0.6	0.7	0.7	0.8
WORLD	**61.7**	**64.6**	**63.8**	**61.2**	**64.3**	**64.2**	**157.5**	**161.7**	**167.0**
Developing countries	41.8	44.9	43.6	50.0	51.6	51.7	100.1	104.5	107.7
Developed countries	19.9	19.7	20.2	11.2	12.7	12.5	57.5	57.1	59.3
LIFDCs	27.2	30.9	29.2	19.8	21.9	22.7	69.5	73.2	75.4
LDCs	4.1	4.0	4.2	0.4	0.4	0.4	7.0	6.8	7.0

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

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

	Imports			Exports			Utilization		
	2007/08	2008/09 *estim.*	2009/10 *f'cast*	2007/08	2008/09 *estim.*	2009/10 *f'cast*	2007/08	2008/09 *estim.*	2009/10 *f'cast*
ASIA	**23.7**	**23.3**	**24.6**	**14.8**	**12.9**	**14.7**	**102.0**	**104.7**	**109.9**
China	2.6	2.4	2.4	1.2	1.6	1.8	51.8	53.6	58.4
of which Taiwan Prov.	0.5	0.5	0.6	-	-	-	2.3	2.3	2.3
India	0.1	0.1	0.1	6.9	4.7	6.1	10.6	11.6	11.3
Indonesia	2.6	2.4	2.6	2.6	2.7	2.9	3.1	3.0	3.1
Japan	2.3	2.5	2.5	-	-	-	7.2	7.1	7.0
Korea, Republic of	3.5	3.3	3.6	-	-	-	4.6	4.5	4.6
Malaysia	0.9	0.8	0.9	2.3	2.4	2.4	1.8	1.7	1.7
Pakistan	0.4	0.4	0.4	0.1	0.1	0.1	2.8	2.8	3.0
Philippines	1.9	1.6	1.8	0.6	0.3	0.4	2.4	2.3	2.3
Saudi Arabia	0.8	0.8	0.8	-	-	-	0.8	0.8	0.8
Thailand	2.4	2.8	2.9	0.1	0.1	0.1	4.4	4.6	4.7
Turkey	0.7	1.0	1.0	0.1	-	-	3.0	3.2	3.2
Viet Nam	1.3	1.2	1.3	0.1	-	-	1.5	1.4	1.5
AFRICA	**3.8**	**3.7**	**4.0**	**0.9**	**0.8**	**0.8**	**9.4**	**9.4**	**9.7**
Egypt	0.7	0.6	0.7	-	-	-	1.8	1.7	1.9
South Africa	1.1	1.1	1.2	-	0.1	-	1.8	1.9	1.9
CENTRAL AMERICA	**3.6**	**3.6**	**3.7**	**0.2**	**0.2**	**0.2**	**8.4**	**8.0**	**8.1**
Mexico	1.9	1.9	2.0	0.1	0.1	0.1	6.3	5.8	5.9
SOUTH AMERICA	**4.6**	**4.5**	**4.6**	**44.1**	**42.1**	**42.2**	**24.5**	**24.3**	**23.5**
Argentina	0.2	0.3	-	27.8	25.5	25.7	4.3	4.3	4.3
Bolivia	-	-	-	1.1	0.9	1.0	0.3	0.4	0.4
Brazil	0.3	0.2	0.3	12.1	13.0	12.5	14.2	13.7	12.9
Chile	0.9	0.8	0.9	0.5	0.5	0.6	1.4	1.3	1.4
Paraguay	-	-	-	0.9	0.5	0.7	0.4	0.5	0.3
Peru	0.7	0.7	0.8	1.6	1.5	1.5	0.9	0.9	0.9
Venezuela	1.1	1.2	1.2	-	-	-	1.1	1.3	1.3
NORTH AMERICA	**3.8**	**3.4**	**3.6**	**11.5**	**10.8**	**12.2**	**37.0**	**33.9**	**35.1**
Canada	1.6	1.3	1.3	2.8	2.7	2.9	2.5	2.1	2.3
United States of America	2.2	2.1	2.3	8.8	8.1	9.3	34.5	31.7	32.8
EUROPE	**33.7**	**31.2**	**31.8**	**3.5**	**4.6**	**4.4**	**61.2**	**60.2**	**61.7**
European Union	31.0	28.9	29.4	0.9	1.1	1.0	56.1	55.1	56.2
Russian Federation	0.9	0.5	0.6	0.9	1.2	1.1	2.5	2.5	2.7
Ukraine	0.1	0.1	0.1	1.3	1.9	1.8	0.2	0.2	0.3
OCEANIA	**2.1**	**2.0**	**2.1**	**0.2**	**0.2**	**0.2**	**2.7**	**2.7**	**2.8**
Australia	0.9	0.8	0.9	-	-	-	1.4	1.5	1.5
WORLD	**75.2**	**71.7**	**74.4**	**75.2**	**71.7**	**74.7**	**245.0**	**243.2**	**250.8**
Developing countries	31.8	31.1	32.8	59.9	55.9	57.8	133.4	135.7	140.6
Developed countries	43.3	40.6	41.6	15.4	15.8	16.9	111.6	107.6	110.3
LIFDCs	10.7	9.7	10.4	12.4	10.4	12.4	78.8	81.5	86.6
LDCs	0.4	0.5	0.5	0.4	0.4	0.4	3.2	3.4	3.4

[1] Includes meals and cakes derived from oilcrops as well as fishmeal and other meals of animal origin.

Table A13. Total meat statistics[1] *(thousand tonnes, carcass weight equivalent)*

	Production		Imports		Exports		Utilization	
	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**118 713**	**121 581**	**10 767**	**10 968**	**3 020**	**3 135**	**126 460**	**129 414**
China	78 690	80 905	2 779	2 814	1 206	1 230	80 263	82 489
of which Hong Kong, SAR	236	247	1 415	1 488	535	552	1 115	1 182
India	7 121	7 384	2	2	658	664	6 465	6 722
Indonesia	2 727	2 802	102	97	7	7	2 822	2 893
Iran, Islamic Republic of	2 432	2 511	146	146	27	27	2 551	2 630
Japan	3 177	3 154	2 840	2 827	10	12	6 007	5 969
Korea, Republic of	1 928	1 955	731	771	32	37	2 626	2 688
Malaysia	1 269	1 275	159	157	23	29	1 404	1 403
Pakistan	2 191	2 233	10	11	26	29	2 176	2 215
Philippines	2 590	2 572	241	238	16	17	2 814	2 793
Saudi Arabia	757	768	845	875	56	57	1 547	1 586
Singapore	109	110	278	292	17	18	370	384
Thailand	2 382	2 444	14	13	633	689	1 763	1 768
Turkey	1 881	1 906	69	67	88	89	1 861	1 884
Viet Nam	3 390	3 400	524	584	11	12	3 902	3 972
AFRICA	**13 032**	**13 239**	**1 618**	**1 585**	**107**	**111**	**14 543**	**14 713**
Algeria	589	586	81	71	-	-	670	658
Angola	140	141	341	331	-	-	481	472
Egypt	1 257	1 276	141	160	2	2	1 396	1 434
Nigeria	1 146	1 166	2	2	-	-	1 147	1 168
South Africa	2 157	2 158	320	327	20	22	2 457	2 463
CENTRAL AMERICA	**8 183**	**8 330**	**2 088**	**2 167**	**293**	**310**	**9 977**	**10 187**
Cuba	209	217	174	183	-	-	383	400
Mexico	5 714	5 813	1 500	1 557	138	147	7 076	7 222
SOUTH AMERICA	**34 398**	**35 035**	**877**	**838**	**7 299**	**7 666**	**27 976**	**28 206**
Argentina	4 955	4 658	34	37	753	629	4 236	4 065
Brazil	20 894	21 747	42	38	5 632	6 068	15 304	15 718
Chile	1 422	1 442	188	171	262	279	1 348	1 334
Colombia	2 146	2 153	35	36	134	144	2 047	2 045
Uruguay	629	643	15	13	315	325	329	331
Venezuela	1 390	1 394	516	497	-	-	1 907	1 890
NORTH AMERICA	**46 318**	**46 026**	**2 435**	**2 555**	**7 055**	**7 081**	**41 698**	**41 500**
Canada	4 437	4 299	666	727	1 664	1 643	3 439	3 383
United States of America	41 880	41 726	1 752	1 811	5 391	5 438	38 241	38 099
EUROPE	**55 008**	**55 886**	**5 107**	**5 154**	**2 641**	**2 712**	**57 473**	**58 328**
Belarus	877	884	48	48	145	148	780	784
European Union	43 687	44 097	1 782	1 799	2 365	2 428	43 105	43 468
Russian Federation	6 551	6 887	2 467	2 511	49	53	8 970	9 345
Ukraine	1 800	1 915	340	320	27	27	2 113	2 208
OCEANIA	**6 011**	**6 064**	**331**	**374**	**2 669**	**2 641**	**3 674**	**3 798**
Australia	4 027	4 081	139	148	1 676	1 654	2 490	2 575
New Zealand	1 500	1 492	57	57	990	984	566	565
WORLD	**281 662**	**286 162**	**23 222**	**23 640**	**23 083**	**23 657**	**281 800**	**286 145**
Developing countries	166 512	170 395	11 869	12 111	10 651	11 149	167 730	171 357
Developed countries	115 150	115 767	11 353	11 529	12 432	12 508	114 071	114 788
LIFDCs	106 947	109 761	3 398	3 374	1 649	1 673	108 697	111 462
LDCs	7 587	7 730	823	818	4	4	8 407	8 544

[1] Including "other meat".

Table A14. Bovine meat statistics *(thousand tonnes, carcass weight equivalent)*

	Production		Imports		Exports		Utilization	
	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**16 116**	**16 011**	**2 591**	**2 623**	**780**	**798**	**17 926**	**17 836**
China	6 155	5 848	364	386	74	80	6 445	6 154
India	3 062	3 215	1	1	632	636	2 431	2 580
Indonesia	490	495	85	80	-	-	575	575
Iran, Islamic Republic of	370	370	125	120	-	-	495	490
Japan	522	520	628	634	2	2	1 148	1 152
Korea, Republic of	293	303	310	304	1	1	601	605
Malaysia	27	28	93	90	6	6	115	112
Pakistan	1 226	1 250	5	5	17	20	1 214	1 235
Philippines	285	259	110	100	-	-	395	359
AFRICA	**4 857**	**4 953**	**477**	**441**	**68**	**72**	**5 267**	**5 322**
Algeria	130	130	75	65	-	-	205	195
Angola	85	85	95	85	-	-	180	170
Egypt	464	470	117	136	1	1	580	605
South Africa	800	800	10	5	9	11	801	794
CENTRAL AMERICA	**2 322**	**2 335**	**383**	**408**	**154**	**163**	**2 551**	**2 579**
Mexico	1 661	1 666	277	307	38	39	1 900	1 934
SOUTH AMERICA	**14 493**	**14 447**	**476**	**429**	**2 491**	**2 572**	**12 477**	**12 304**
Argentina	3 163	2 767	2	10	501	341	2 664	2 436
Brazil	8 364	8 698	30	25	1 371	1 576	7 023	7 147
Chile	250	255	150	130	10	10	390	375
Colombia	900	900	2	2	130	140	772	762
Uruguay	520	530	3	3	283	291	240	242
Venezuela	385	380	280	250	-	-	665	630
NORTH AMERICA	**13 051**	**12 842**	**1 397**	**1 459**	**1 136**	**1 196**	**13 335**	**13 164**
Canada	1 300	1 275	238	254	430	443	1 108	1 086
United States of America	11 751	11 567	1 155	1 201	706	753	12 223	12 074
EUROPE	**10 718**	**10 638**	**1 270**	**1 364**	**274**	**280**	**11 714**	**11 722**
European Union	7 898	7 852	470	490	160	160	8 208	8 182
Russian Federation	1 578	1 559	662	734	12	14	2 228	2 279
Ukraine	414	398	38	37	17	17	435	418
OCEANIA	**2 810**	**2 821**	**49**	**49**	**1 794**	**1 749**	**1 065**	**1 121**
Australia	2 101	2 122	7	6	1 274	1 237	834	891
New Zealand	690	680	12	12	518	510	184	182
WORLD	**64 366**	**64 047**	**6 645**	**6 773**	**6 697**	**6 830**	**64 336**	**64 049**
Developing countries	35 064	35 027	3 148	3 122	3 480	3 590	34 731	34 558
Developed countries	29 302	29 020	3 497	3 651	3 217	3 240	29 605	29 490
LIFDCs	17 149	17 097	683	663	858	865	16 974	16 895
LDCs	2 742	2 816	140	129	2	2	2 879	2 942

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

	Production		Imports		Exports		Utilization	
	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*	2009 *estim.*	2010 *f'cast*
ASIA	**7 972**	**8 168**	**329**	**347**	**52**	**53**	**8 249**	**8 462**
Bangladesh	220	224	-	-	-	-	220	224
China	4 203	4 353	102	106	17	17	4 288	4 443
India	785	790	-	-	20	21	765	769
Iran, Islamic Republic of	500	502	-	-	-	-	500	502
Pakistan	435	450	-	-	8	8	428	442
Saudi Arabia	98	97	68	70	5	5	161	162
Syria	225	230	-	-	-	-	225	230
Turkey	318	320	1	1	-	-	319	321
AFRICA	**2 257**	**2 277**	**66**	**69**	**15**	**15**	**2 308**	**2 331**
Algeria	191	190	4	4	-	-	195	194
Nigeria	258	264	-	-	-	-	258	264
South Africa	157	158	35	37	-	-	192	195
Sudan	334	334	-	-	1	1	333	333
CENTRAL AMERICA	**118**	**120**	**39**	**40**	**-**	**-**	**157**	**160**
Mexico	93	94	26	27	-	-	119	121
SOUTH AMERICA	**341**	**348**	**9**	**10**	**32**	**34**	**318**	**324**
Brazil	125	129	9	10	-	-	133	138
NORTH AMERICA	**122**	**121**	**97**	**89**	**3**	**3**	**216**	**207**
United States of America	104	103	80	74	3	3	181	174
EUROPE	**1 355**	**1 351**	**312**	**311**	**14**	**16**	**1 653**	**1 645**
European Union	1 080	1 070	280	277	10	12	1 350	1 335
Russian Federation	167	173	18	20	-	-	185	193
OCEANIA	**1 231**	**1 240**	**44**	**46**	**753**	**762**	**522**	**524**
Australia	658	664	-	-	313	320	345	344
New Zealand	572	575	4	4	440	442	136	137
WORLD	**13 396**	**13 625**	**896**	**913**	**869**	**884**	**13 423**	**13 653**
Developing countries	10 085	10 308	419	442	98	102	10 406	10 647
Developed countries	3 311	3 317	477	471	771	782	3 017	3 006
LIFDCs	8 553	8 759	108	111	48	50	8 613	8 821
LDCs	1 456	1 466	7	8	1	1	1 462	1 472

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

	Production		Imports		Exports		Utilization	
	2009 estim.	2010 f'cast	2009 estim.	2010 f'cast	2009 estim.	2010 f'cast	2009 estim.	2010 f'cast
ASIA	**60 659**	**62 518**	**2 725**	**2 794**	**385**	**394**	**63 053**	**64 918**
China	50 856	52 707	740	742	323	325	51 273	53 124
of which Hong Kong, SAR	170	180	536	568	88	80	618	668
India	500	500	1	1	3	3	498	498
Indonesia	620	625	4	4	3	3	621	626
Japan	1 285	1 270	1 278	1 284	1	1	2 562	2 553
Korea, D.P.R.	172	173	5	5	-	-	177	178
Korea, Republic of	1 016	1 009	329	372	20	25	1 380	1 356
Malaysia	190	190	12	10	3	3	199	197
Philippines	1 585	1 585	70	75	2	2	1 653	1 658
Thailand	900	910	3	3	16	16	887	897
Viet Nam	2 578	2 578	45	50	11	12	2 612	2 616
AFRICA	**831**	**844**	**137**	**158**	**9**	**9**	**959**	**993**
Madagascar	80	82	-	-	-	-	80	83
Nigeria	215	220	-	-	-	-	215	220
South Africa	149	148	10	20	2	2	157	166
Uganda	65	65	-	-	-	-	65	65
CENTRAL AMERICA	**1 550**	**1 586**	**599**	**631**	**109**	**114**	**2 039**	**2 102**
Cuba	110	115	15	20	-	-	125	135
Mexico	1 152	1 175	504	520	94	99	1 562	1 596
SOUTH AMERICA	**4 262**	**4 393**	**58**	**52**	**792**	**845**	**3 529**	**3 600**
Argentina	240	245	25	20	2	2	263	263
Brazil	2 590	2 694	-	-	655	707	1 935	1 988
Chile	515	520	3	3	133	135	385	388
Colombia	201	204	5	6	-	-	206	210
Venezuela	160	165	6	6	-	-	166	171
NORTH AMERICA	**12 334**	**11 935**	**611**	**663**	**2 750**	**2 840**	**10 191**	**9 758**
Canada	1 888	1 750	195	228	1 030	1 002	1 053	976
United States of America	10 446	10 185	411	430	1 720	1 838	9 133	8 777
EUROPE	**26 296**	**26 911**	**1 223**	**1 200**	**1 371**	**1 440**	**26 148**	**26 671**
Belarus	365	370	30	30	70	70	325	330
European Union	22 141	22 584	55	55	1 250	1 316	20 946	21 323
Russian Federation	2 160	2 244	831	825	30	32	2 961	3 037
Serbia	620	620	13	13	6	6	626	627
Ukraine	490	570	157	139	-	-	647	710
OCEANIA	**526**	**529**	**182**	**222**	**40**	**43**	**668**	**708**
Australia	384	387	128	138	40	42	473	482
Papua New Guinea	70	70	4	5	-	-	74	75
WORLD	**106 458**	**108 716**	**5 535**	**5 720**	**5 457**	**5 685**	**106 587**	**108 750**
Developing countries	65 677	67 731	2 161	2 288	1 292	1 359	66 600	68 660
Developed countries	40 781	40 985	3 374	3 431	4 164	4 326	39 986	40 090
LIFDCs	54 068	55 934	514	505	323	333	54 259	56 106
LDCs	1 057	1 077	106	112	-	-	1 163	1 190

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

	Production		Imports		Exports		Utilization	
	2009 estim.	2010 f'cast	2009 estim.	2010 f'cast	2009 estim.	2010 f'cast	2009 estim.	2010 f'cast
ASIA	**32 058**	**32 957**	**5 077**	**5 160**	**1 769**	**1 836**	**35 365**	**36 281**
China	16 069	16 580	1 564	1 572	774	790	16 859	17 361
of which Hong Kong, SAR	44	45	632	657	410	420	266	282
India	2 629	2 732	-	-	3	3	2 627	2 729
Indonesia	1 490	1 550	8	8	-	-	1 498	1 558
Iran, Islamic Republic of	1 546	1 623	20	25	26	26	1 540	1 622
Japan	1 358	1 352	892	866	8	9	2 242	2 209
Korea, Republic of	605	629	79	82	11	11	673	700
Kuwait	46	48	215	220	70	70	191	198
Malaysia	1 050	1 055	35	37	15	-	1 070	1 092
Saudi Arabia	580	590	635	660	40	41	1 175	1 209
Singapore	84	83	132	138	10	10	206	211
Thailand	1 221	1 270	4	4	612	667	613	607
Turkey	1 100	1 113	65	63	85	86	1 080	1 090
Yemen	128	132	80	82	-	-	208	214
AFRICA	**3 701**	**3 749**	**907**	**886**	**7**	**7**	**4 600**	**4 628**
Angola	9	9	170	165	-	-	179	174
South Africa	1 030	1 030	265	265	3	3	1 292	1 292
CENTRAL AMERICA	**4 074**	**4 170**	**1 046**	**1 067**	**27**	**31**	**5 092**	**5 206**
Cuba	37	39	145	148	-	-	182	187
Mexico	2 707	2 775	678	688	5	8	3 380	3 455
SOUTH AMERICA	**15 063**	**15 606**	**332**	**345**	**3 918**	**4 148**	**11 478**	**11 803**
Argentina	1 367	1 459	7	7	212	248	1 162	1 218
Brazil	9 785	10 196	4	3	3 583	3 762	6 206	6 437
Chile	630	640	35	38	110	125	555	553
Venezuela	837	840	230	240	-	-	1 067	1 080
NORTH AMERICA	**20 563**	**20 878**	**319**	**333**	**3 128**	**3 004**	**17 801**	**18 224**
Canada	1 209	1 234	213	227	185	179	1 237	1 282
United States of America	19 354	19 644	98	98	2 943	2 825	16 557	16 935
EUROPE	**15 442**	**15 791**	**2 141**	**2 119**	**897**	**891**	**16 686**	**17 020**
European Union	11 526	11 549	877	877	863	858	11 540	11 568
Russian Federation	2 554	2 820	915	890	6	6	3 463	3 704
Ukraine	850	900	144	143	9	9	985	1 034
OCEANIA	**1 036**	**1 059**	**52**	**54**	**41**	**46**	**1 047**	**1 066**
Australia	863	886	2	3	35	40	830	849
New Zealand	147	146	-	-	6	6	142	141
WORLD	**91 937**	**94 210**	**9 874**	**9 965**	**9 788**	**9 963**	**92 070**	**94 229**
Developing countries	51 816	53 403	6 057	6 176	5 676	5 973	52 196	53 606
Developed countries	40 120	40 807	3 817	3 788	4 111	3 990	39 874	40 623
LIFDCs	24 464	25 222	2 005	2 004	392	397	26 078	26 829
LDCs	1 713	1 737	546	545	1	1	2 258	2 281

Table A18. Milk and milk products statistics *(million tonnes, milk equivalent)*

	Production			Imports			Exports		
	2008	2009 estim.	2010 f'cast	2008	2009 estim.	2010 f'cast	2008	2009 estim.	2010 f'cast
ASIA	**248.0**	**254.8**	**264.7**	**18.6**	**17.8**	**18.7**	**5.5**	**5.1**	**5.6**
China	41.4	43.6	47.6	1.9	2.3	2.4	0.6	0.6	0.7
India[1]	109.1	112.3	116.7	-	0.2	0.2	0.5	0.4	0.5
Indonesia	1.0	1.0	1.0	1.6	1.6	1.7	0.2	0.2	0.2
Iran, Islamic Republic of	7.9	8.2	8.5	0.5	0.4	0.5	-	-	0.1
Japan	8.0	8.0	8.0	1.3	1.4	1.4	-	-	-
Korea, Republic of	2.1	2.0	2.1	0.3	0.3	0.3	-	-	-
Malaysia	-	-	-	1.2	1.3	1.3	0.4	0.1	0.3
Pakistan	33.1	33.2	33.3	0.1	0.1	0.1	-	-	-
Philippines	-	-	-	1.4	1.5	1.6	0.2	0.2	0.2
Saudi Arabia	1.3	1.3	1.3	1.9	1.7	1.9	1.3	1.3	1.4
Singapore	-	-	-	1.0	0.9	0.9	0.7	0.7	0.7
Thailand	1.0	1.0	1.1	0.8	0.6	0.5	0.1	0.1	0.1
Turkey	12.2	12.2	12.3	0.2	0.1	0.1	0.1	0.1	0.1
AFRICA	**36.1**	**36.6**	**37.4**	**6.9**	**6.6**	**6.9**	**0.5**	**0.5**	**0.5**
Algeria	2.1	2.2	2.2	2.2	2.2	2.3	0.5	0.5	0.5
Egypt	4.7	4.9	5.1	0.8	0.7	0.7	0.1	0.1	0.1
Kenya	4.5	4.2	4.4	-	-	-	-	-	-
South Africa	3.1	3.2	3.2	0.1	0.1	0.1	0.1	0.1	0.1
Sudan	8.0	8.2	8.4	0.2	0.3	0.3	-	-	-
Tunisia	1.0	1.0	1.0	0.1	-	-	-	-	-
CENTRAL AMERICA	**15.8**	**16.1**	**16.4**	**3.7**	**3.8**	**4.0**	**0.3**	**0.3**	**0.3**
Costa Rica	0.9	0.9	0.9	-	-	-	-	-	0.1
Mexico	10.8	11.0	11.3	2.3	2.4	2.5	0.1	0.1	0.1
SOUTH AMERICA	**57.4**	**57.7**	**59.1**	**3.2**	**2.3**	**2.6**	**3.1**	**3.6**	**3.8**
Argentina	10.3	10.4	10.6	-	-	-	1.3	1.4	1.5
Brazil	28.1	28.1	28.9	0.4	0.2	0.2	0.8	1.1	1.2
Colombia	5.2	5.0	4.8	-	-	-	0.1	0.1	0.1
Uruguay	1.6	1.6	1.7	-	-	-	0.6	0.6	0.6
Venezuela	1.4	1.4	1.3	2.5	1.7	2.0	-	-	-
NORTH AMERICA	**94.5**	**93.7**	**92.9**	**2.1**	**2.1**	**2.1**	**4.4**	**2.6**	**2.6**
Canada	8.3	8.3	8.2	0.4	0.5	0.5	0.2	0.2	0.2
United States of America	86.2	85.5	84.7	1.7	1.6	1.6	4.3	2.3	2.4
EUROPE	**215.4**	**216.1**	**217.0**	**5.3**	**5.2**	**5.5**	**13.0**	**11.6**	**11.4**
Belarus	6.2	6.4	6.6	-	-	-	1.8	1.8	1.9
European Union	153.7	154.0	154.7	1.2	1.1	1.1	9.5	8.4	8.1
Russian Federation	32.5	32.8	33.2	3.3	3.3	3.5	0.2	0.2	0.2
Ukraine	11.8	11.5	11.2	0.1	0.2	0.3	0.9	0.6	0.6
OCEANIA	**24.6**	**26.0**	**26.2**	**0.8**	**0.8**	**0.8**	**13.7**	**15.0**	**16.4**
Australia[2]	9.2	9.4	9.2	0.6	0.6	0.6	3.3	3.7	3.7
New Zealand[3]	15.3	16.6	16.9	0.1	0.1	0.1	10.4	11.3	12.7
WORLD	**691.7**	**700.9**	**713.6**	**40.5**	**38.7**	**40.6**	**40.5**	**38.6**	**40.6**
Developing countries	328.5	335.7	347.5	30.3	28.5	30.2	9.1	9.2	9.9
Developed countries	363.2	365.2	366.1	10.3	10.1	10.4	31.4	29.4	30.6
LIFDCs	250.3	257.6	268.1	10.8	10.9	11.5	3.9	3.9	4.1
LDCs	25.7	26.2	26.7	2.1	2.1	2.3	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 A19. Sugar statistics *(million tonnes, raw value)*

	Production		Utilization		Imports		Exports	
	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*	2008/09 *estim.*	2009/10 *f'cast*
ASIA	**51.6**	**54.6**	**74.7**	**74.8**	**24.7**	**27.2**	**10.7**	**10.5**
China	13.6	14.1	16.5	16.8	2.1	1.9	0.1	0.4
India	15.7	17.5	24.3	24.6	3.0	5.9	0.2	-
Indonesia	3.1	3.2	4.8	4.9	1.4	1.1	-	-
Japan	0.9	0.9	2.5	2.4	1.5	1.5	-	-
Malaysia	-	-	1.3	1.4	1.5	1.4	0.2	0.1
Pakistan	4.0	3.7	4.6	4.7	0.3	0.5	0.3	-
Philippines	2.3	2.3	2.1	2.2	-	-	0.3	0.2
Thailand	7.5	8.0	2.6	2.7	-	-	5.0	5.2
Turkey	2.1	2.4	2.2	2.3	0.1	0.2	-	-
Viet Nam	1.1	1.2	1.4	1.5	0.4	0.4	-	-
AFRICA	**10.8**	**11.2**	**15.0**	**15.2**	**9.3**	**9.0**	**5.0**	**5.0**
Egypt	1.9	1.9	2.8	2.9	1.2	1.2	0.2	0.2
Ethiopia	0.4	0.4	0.4	0.4	0.1	0.1	0.1	0.1
Kenya	0.6	0.6	0.9	0.9	0.3	0.3	-	-
Mauritius	0.6	0.5	-	-	-	-	0.6	0.5
Mozambique	0.3	0.4	0.2	0.2	0.2	0.1	0.3	0.3
South Africa	2.3	2.4	1.6	1.7	0.1	0.1	0.8	0.9
Sudan	0.8	1.0	1.0	1.1	0.4	0.3	0.2	0.2
Swaziland	0.7	0.7	-	-	-	-	0.6	0.7
Tanzania, United Rep. of	0.3	0.3	0.5	0.5	0.2	0.2	-	-
CENTRAL AMERICA	**11.8**	**12.6**	**8.9**	**9.1**	**1.2**	**0.9**	**4.5**	**4.7**
Cuba	1.3	1.5	0.7	0.7	0.2	-	0.7	0.8
Dominican Republic	0.5	0.5	0.4	0.4	-	-	0.2	0.2
Guatemala	2.3	2.3	0.8	0.8	-	-	1.5	1.7
Mexico	5.2	5.7	5.5	5.6	0.5	0.4	0.7	0.5
SOUTH AMERICA	**46.3**	**46.4**	**19.8**	**20.5**	**1.0**	**1.1**	**25.6**	**26.8**
Argentina	2.3	2.5	1.9	1.9	-	-	0.5	0.5
Brazil	38.4	38.0	12.3	12.8	-	-	24.0	25.1
Colombia	2.2	2.4	1.6	1.6	0.2	-	0.6	0.7
Peru	1.1	1.2	1.2	1.2	0.1	0.2	0.1	-
Venezuela	0.7	0.7	1.0	1.1	0.2	0.4	-	-
NORTH AMERICA	**7.1**	**7.6**	**11.1**	**11.3**	**4.1**	**3.9**	**0.1**	**0.1**
United States of America	7.0	7.5	9.6	9.8	2.7	2.5	0.1	0.1
EUROPE	**22.3**	**22.3**	**29.9**	**30.2**	**8.5**	**9.6**	**1.5**	**1.8**
European Union	15.1	15.6	18.7	19.1	4.0	4.5	0.7	1.0
Russian Federation	3.8	3.3	6.6	6.6	2.8	3.3	0.1	0.1
Ukraine	1.7	1.8	2.3	2.4	0.4	0.4	-	-
OCEANIA	**4.9**	**5.0**	**1.6**	**1.6**	**0.3**	**0.3**	**3.5**	**4.1**
Australia	4.7	4.7	1.2	1.3	-	-	3.3	3.9
Fiji	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2
WORLD	**154.7**	**159.7**	**160.9**	**162.6**	**49.2**	**52.1**	**49.2**	**52.1**
Developing countries	117.3	121.7	112.0	113.0	31.8	34.0	42.9	44.9
Developed countries	37.4	38.0	48.9	49.6	17.3	18.1	6.3	7.2
LIFDCs	48.7	51.2	70.6	71.7	20.6	22.6	5.9	5.8
LDCs	3.6	3.9	6.4	6.5	4.7	4.5	1.9	1.9

Table A20. Fish and fishery products statistics [1]

	Capture fisheries production		Aquaculture fisheries production		Exports			Imports		
	2006	2007	2006	2007	2007	2008 estim.	2009 f'cast	2007	2008 estim.	2009 f'cast.
	Million tonnes (live weight equivalent)				USD billion					
ASIA	**45.7**	**46.5**	**41.9**	**44.6**	**31.4**	**34.6**	**32.6**	**29.5**	**32.8**	**30.3**
China[2]	15.8	16.0	30.2	31.7	11.3	12.7	12.2	7.4	8.4	8.2
of which: Hong Kong SAR	0.2	0.2	-	-	0.4	0.5	0.5	2.2	2.4	2.4
Taiwan Prov.	1.0	1.2	0.3	0.3	1.6	1.9	1.6	0.6	0.7	0.7
India	3.8	4.0	3.2	3.4	1.7	1.8	1.7	-	0.1	0.1
Indonesia	4.8	4.9	1.3	1.4	2.1	2.2	2.1	0.1	0.1	0.1
Japan	4.3	4.2	0.7	0.8	1.7	1.6	1.4	13.2	14.5	13.1
Korea, Rep. of	1.8	1.9	0.5	0.6	1.1	1.3	1.2	3.1	2.9	2.5
Philippines	2.3	2.5	0.6	0.7	0.5	0.7	0.6	0.1	0.2	0.2
Thailand	2.7	2.5	1.4	1.4	5.7	6.5	6.1	1.7	2.4	2.1
Viet Nam	2.0	2.1	1.7	2.2	3.8	4.0	3.9	0.4	0.4	0.4
AFRICA	**7.0**	**7.1**	**0.8**	**0.8**	**4.5**	**4.7**	**4.2**	**2.4**	**2.7**	**2.6**
Ghana	0.4	0.3	-	-	0.1	-	-	0.2	0.1	0.1
Morocco	0.9	0.9	-	-	1.4	1.5	1.4	0.1	0.1	0.1
Namibia	0.5	0.4	-	-	0.5	0.5	0.5	-	-	-
Nigeria	0.6	0.5	0.1	0.1	-	0.1	0.1	0.5	0.6	0.5
Senegal	0.4	0.4	-	-	0.3	0.2	0.2	-	-	-
South Africa	0.6	0.7	-	-	0.5	0.5	0.5	0.2	0.2	0.2
CENTRAL AMERICA	**1.9**	**1.8**	**0.3**	**0.3**	**2.0**	**2.2**	**1.9**	**1.1**	**1.2**	**1.1**
Mexico	1.4	1.3	0.2	0.2	0.8	0.9	0.8	0.5	0.6	0.6
Panama	0.2	0.2	-	-	0.4	0.4	0.4	-	-	-
SOUTH AMERICA	**14.5**	**14.0**	**1.4**	**1.4**	**9.1**	**10.6**	**9.7**	**1.4**	**2.0**	**1.9**
Argentina	1.2	1.0	-	-	1.1	1.3	1.3	0.1	0.1	0.1
Brazil	0.8	0.8	0.3	0.3	0.3	0.3	0.3	0.6	0.7	0.7
Chile	4.2	3.8	0.8	0.8	3.7	4.1	3.8	0.2	0.3	0.3
Ecuador	0.4	0.4	0.2	0.2	1.4	1.8	1.6	0.1	0.2	0.2
Peru	7.0	7.2	-	-	2.0	2.4	2.3	-	-	-
NORTH AMERICA	**6.2**	**6.0**	**0.7**	**0.7**	**8.4**	**8.5**	**8.0**	**15.6**	**17.1**	**16.1**
Canada	1.1	1.0	0.2	0.2	3.7	3.8	3.7	2.0	2.1	2.1
United States of America	4.9	4.8	0.5	0.5	4.4	4.5	4.0	13.6	15.0	14.0
EUROPE	**13.4**	**13.3**	**2.2**	**2.3**	**35.9**	**38.6**	**34.8**	**46.8**	**50.9**	**45.1**
European Union[2]	5.6	5.2	1.3	1.3	24.3	26.2	22.5	41.9	45.2	39.5
Iceland	1.3	1.4	-	-	2.0	2.0	1.7	0.1	0.1	0.1
Norway	2.3	2.4	0.7	0.8	6.2	7.0	7.1	1.1	1.2	1.2
Russian Federation	3.3	3.5	0.1	0.1	2.4	2.4	2.3	2.0	2.3	2.3
OCEANIA	**1.2**	**1.2**	**0.2**	**0.2**	**2.3**	**2.3**	**2.3**	**1.3**	**1.4**	**1.3**
Australia	0.2	0.2	-	0.1	0.9	0.9	0.9	1.1	1.1	1.1
New Zealand	0.5	0.5	0.1	0.1	0.9	1.0	1.0	0.1	0.1	0.1
WORLD[3]	**89.9**	**90.1**	**47.3**	**50.3**	**93.5**	**101.6**	**93.4**	**98.1**	**108.0**	**98.5**
Developing countries	65.2	65.8	43.6	46.4	45.7	50.9	47.4	21.3	24.3	23.0
Developed countries	24.6	24.2	3.7	4.0	47.8	50.7	46.0	76.8	83.7	75.5
LIFDCs	34.8	35.4	37.0	39.1	18.1	19.9	18.8	6.9	7.9	7.6
LDCs	7.4	7.9	1.7	1.8	2.5	2.5	2.3	0.9	0.9	0.8

[1] Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fishmeal and fish oil.
[2] Including intratrade. Cyprus is included in the European Union as well as in Asia.
[3] For capture fisheries production, the aggregate includes also 72 094 tonnes in 2006 and 64 801 in 2007 of not identified countries, data not included in any other aggregates.

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

Period	Wheat			Maize		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]	US No. 2 Yellow [2]
Annual (July/June)						
2004/05	154	138	123	97	90	99
2005/06	175	138	138	104	101	109
2006/07	212	176	188	150	145	155
2007/08	361	311	322	200	192	206
2008/09	270	201	234	188	180	170
Monthly						
2008 – November	247	182	189	166	156	146
2008 – December	240	182	177	160	152	151
2009 – January	256	193	213	172	159	148
2009 – February	241	183	218	163	158	145
2009 – March	244	186	214	165	163	153
2009 – April	242	180	211	168	166	149
2009 – May	265	201	210	180	185	167
2009 – June	263	201	228	177	185	167
2009 – July	232	175	234	151	164	145
2009 – August	218	161	229	153	166	154
2009 – September	200	158	208	152	163	152
2009 – October	212	175	214	168	175	174
2009 – November	227	204	214	172	175	182

[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 2009	Dec 2008	Mar 2010	Mar 2009	May 2010	May 2009	July 2010	July 2009
Wheat								
Oct 20	190	207	197	214	201	219	205	224
Oct 27	185	195	192	202	196	206	200	211
Nov 3	189	206	197	214	202	219	206	224
Nov 10	192	191	200	199	204	204	209	209
Nov 17	211	196	219	204	224	209	227	214
Nov 24	196	197	203	205	208	210	212	214
Maize								
Oct 20	151	165	156	172	160	176	163	181
Oct 27	146	152	151	158	154	163	157	167
Nov 3	154	159	159	166	163	170	166	175
Nov 10	155	151	161	158	165	163	168	167
Nov 17	158	152	164	159	168	163	171	168
Nov 24	148	140	154	146	158	150	162	155

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 quanlity	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
Monthly									
2008 – November	591	320	698	1100	269	239	188	391	237
2008 – December	582	310	683	1100	265	237	178	388	237
2009 – January	611	332	625	1100	270	240	192	389	239
2009 – February	624	333	586	900	270	240	200	388	218
2009 – March	637	335	529	900	269	238	201	388	214
2009 – April	607	341	540	900	271	232	204	394	218
2009 – May	559	316	544	1060	251	224	195	341	236
2008 – June	581	320	537	1100	252	225	189	344	243
2009 – July	586	323	530	1100	251	227	189	338	247
2009 – August	565	310	544	1100	251	223	190	339	253
2009 – September	560	307	532	838	232	221	185	288	234
2009 – October	535	303	504	750	228	213	182	289	228
2009 – November	559	339	528	750	237	227	207	281	227

[1] White rice, 100 percent second grade, f.o.b. Bangkok, indicative traded prices.
[2] A1 super, f.o.b. Bangkok, indicative traded prices.
[3] US 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 subindex for Aromatic Rice follows movements in prices of Basmati and Fragrant rice.
Sources: FAO for indices. Rice prices: Jackson Son and 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]	Rapesed meal[5]	Oilseeds	Edible/soap fats/oils	Oilcakes/meals
Annual (Oct/Sept)								
2003/04	322	632	488	257	178	121	116	114
2004/05	275	545	419	212	130	105	105	104
2005/06	259	572	451	202	130	100	125	107
2006/07	335	772	684	264	184	129	153	148
2007/08	549	1325	1050	445	296	217	202	243
2008/09	422	826	627	385	196	156	144	180
Monthly								
2008 - October	394	928	545	338	156	151	153	162
2008 - November	378	824	488	323	155	143	133	154
2008 - December	366	737	508	307	172	137	126	154
2009 - January	411	788	553	369	202	152	134	169
2009 - February	386	744	571	378	215	144	131	172
2009 - March	380	728	590	346	208	141	129	165
2009 - April	410	802	699	383	220	151	147	175
2009 - May	472	893	799	441	230	174	168	196
2009 - June	504	894	734	445	227	184	160	200
2009 - July	467	834	641	428	186	169	144	198
2009 - August	474	891	722	437	186	171	156	204
2009 - September	424	850	676	428	192	155	150	206
2009 - October	427	891	676	413	187	158	152	207
2009 - November	442	939	728	422	196	164	162	216

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

Note: The FAO indices are calculated using the Laspeyres formula; the weights used are the average export values of each commodity for the 1998-2000 period. The indices are based on the international prices of five selected seeds, ten selected oils and fats and seven selected cakes and meals.
Sources: FAO and Oil World.

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

	International prices *(USD per tonne)*				FAO dairy price index *(2002-2004=100)*
Period	**Butter [1]**	**Skim milk powder [2]**	**Whole milk powder [3]**	**Cheddar cheese [4]**	
Annual (Jan/Dec)					
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
Monthly					
2008 – November	2 775	2 200	2 550	3 475	160
2008 – December	2 300	2 000	2 163	3 150	142
2009 – January	1 925	1 825	1 900	2 675	122
2009 – February	1 850	1 750	1 850	2 450	114
2009 – March	1 850	1 825	1 900	2 525	118
2009 – April	1 800	1 975	2 063	2 425	117
2009 – May	1 900	2 000	2 200	2 575	124
2009 – June	1 892	2 008	2 100	2 575	123
2009 – July	1 938	2 013	2 013	2 700	126
2009 – August	2 055	2 080	2 168	2 725	129
2009 - September	2 300	2 344	2 675	2 938	144
2009 - October	2 725	2 488	2 850	3 213	158
2009 - November	3 688	3 375	3 525	4 263	208

[1] Butter, 82 percent butterfat, f.o.b. Oceania; indicative traded prices
[2] Skim Milk Powder, 1.25 percent butterfat, f.o.b. Oceania, indicative traded prices
[3] Whole Milk Powder, 26 percent butterfat, f.o.b. Oceania, indicative traded prices
[4] Cheddar Cheese, 39 percent max. moisture, f.o.b. Oceania, indicative traded prices

Note: The FAO Dairy Price Index is derived from a trade-weighted average of a selection of representative internationally-traded dairy products
Sources: FAO for indices. Product prices: Mid-point of price ranges reported by Dairy Market News (USDA)

Table A26. Selected international meat prices

	Pigmeat prices *(USD per tonne)*			Bovine meat prices *(USD per tonne)*			
Period	**USA**	**Brazil**	**Japan**	**USA**	**Argentina**	**Japan**	**Australia**
Annual (Jan/Dec)							
2005	2 161	1 868	5 093	3 919	1 673	5 764	2 617
2006	1 986	1 964	4 540	3 803	2 270	5 685	2 547
2007	2 117	2 034	4 500	4 023	2 385	5 925	2 603
2008	2 270	2 834	5 117	4 325	3 615	6 275	3 138
Monthly							
2008 – September	2 561	3 362	4 973	4 776	3 701	6 465	3 566
2008 - October	2 538	3 079	5 277	4 940	3 643	6 477	3 029
2008 - November	2 485	2 848	5 460	4 571	3 149	5 780	2 535
2008 - December	2 296	2 414	5 760	4 103	2 792	5 640	2 477
2009 - January	2 195	2 004	5 821	3 938	2 530	5 522	2 516
2009 - February	2 197	2 133	5 653	3 794	2 520	5 104	2 362
2009 - March	2 223	2 042	5 364	3 920	2 610	5 088	2 477
2009 - April	2 218	1 926	5 310	3 940	2 656	5 087	2 555
2009 - May	2 312	1 982	5 435	4 014	2 844	5 297	2 637
2009 - June	2 235	2 173	5 433	4 088	2 359	5 207	2 692
2009 - July	2 239	2 089	5 569	4 078	2 283	5 462	2 734
2009 - August	2 246	1 977	5 533	3 883	2 357	5 494	2 727
2009 - September	2 169	2 035	5 762	3 855	2 252	5 406	2648

Pig Meat Prices

USA - Export unit value for frozen product - Foreign Trade Statistics of the United States Census Bureau
BRAZIL - Export unit value for pig meat, f.o.b. – A.B.I.P.E.C.
JAPAN - Pork Import Price (cif) : Frozen Boneless Cuts – A.L.I.C.

Bovine Meat Prices

USA - Frozen beef, export unit value - Foreign Trade Statistics of the United States Census Bureau
ARGENTINA - Export unit value of frozen beef cuts - S.A.G.P.yA.
JAPAN - Beef Import Price (c.i.f.) : Boneless Cuts, fresh or chilled – A.L.I.C.
AUSTRALIA - Up to Oct 02: cow forequarters frozen boneless, 85 percent chemical lean, cif United States port (East Coast) ex-dock
From Nov 02: chucks and cow forequarters - World Bank.

Table A27. Selected international meat prices and FAO meat price indices (1998-2000=100)

	Poultry meat prices *(USD per tonne)*			FAO indices *(2002-2004=100)*[1]			
Period	**USA**	**Japan**	**Brazil**	**Total meat**	**Bovine meat**	**Pig meat**	**Poultry meat**
Annual (Jan/Dec)							
2005	847	2 062	1 233	113	117	104	125
2006	734	1 852	1 181	107	117	95	114
2007	935	1 964	1 447	112	121	98	135
2008	997	3 064	1 906	128	139	108	175
Monthly							
2008 - September	1 070	3 406	2 139	137	151	114	194
2008 - October	1 058	3 748	2 021	135	144	116	196
2008 - November	1 016	3 788	1 853	127	127	117	190
2008 - December	898	3 997	1 602	122	120	114	180
2009 - January	904	3 770	1 507	119	117	112	173
2009 - February	960	3 489	1 124	114	111	111	158
2009 - March	952	3 127	1 378	115	114	109	158
2009 - April	972	2 397	1 453	115	115	108	146
2009 - May	1 012	2 247	1 573	118	119	112	149
2009 - June	1 020	2 122	1 607	118	118	110	148
2009 - July	1 001	2 323	1 654	119	120	111	152
2009 - August	1 022	2 318	1 734	119	119	111	150
2009 – September	1 002	2 311	1 695	118	117	111	153

Poultry Meat Prices

USA - Broiler cuts, export unit value - Foreign Trade Statistics of the United States Census Bureau
JAPAN - Broiler Import Price, cif; Frozen, other than leg quarters - A.L.I.C.
BRAZIL - Export unit value for chicken, fob - A.B.E.F.

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

Table A28. Selected international commodity prices

	Currency and unit	Effective date	Latest quotation	One month ago	One year ago	Average 2004-2008
Sugar (ISA daily price)	US cents per lb	25-11-09	21.88	22.43	11.91	10.94
Coffee (ICO daily price)	US cents per lb	26-11-09	120.25	120.37	107.88	95.84
Cocoa (ICCO daily price)	US cents per lb	25-11-09	157.82	158.01	93.79	83.55
Tea (FAO Tea Composite Price)	USD per kg	30-10-09	2.96	3.18	2.25	1.89
Cotton (NYBOT) [1]	US cents per lb	20-11-09	67.00	68.38	45.98	59.94
Jute "BWD"f.o.b. Mongla at sight	USD per tonne	27-11-09	650.00	630.00	510.00	370.26
Wool (64's, London) [2]	Pence per kg					

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

IMPLIED VOLATILITIES

During the last bout of market upheaval over 2006-2008, Food Outlook regularly examined the evolution of implied volatility to gain an insight into which direction global markets for several key commodities are likely headed. With concerns resurfacing about the prospect of another prolonged round of escalating prices, this edition revisits this important metric.

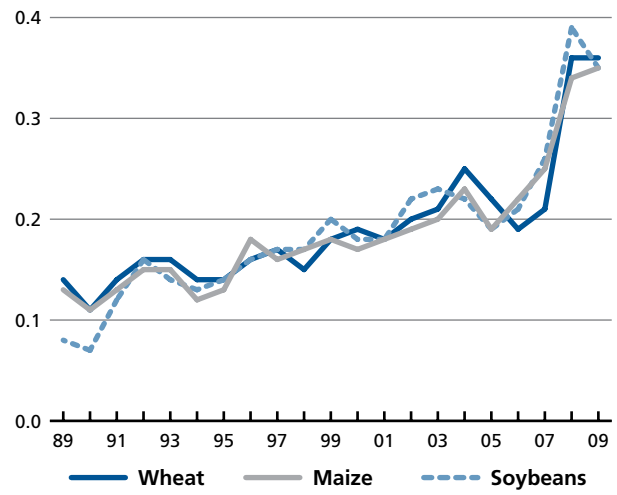
Measuring Implied Volatility

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

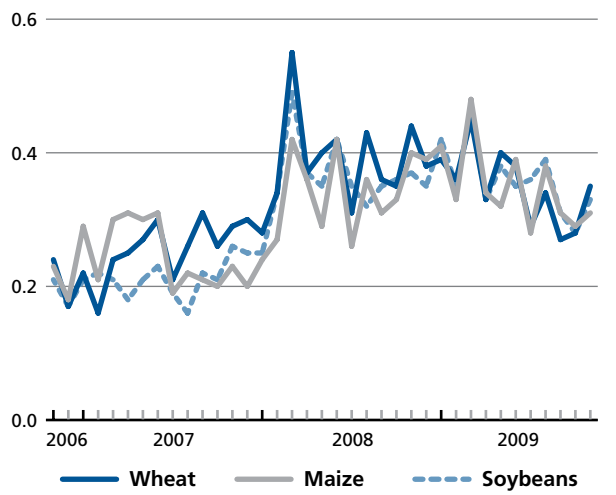
An "option" gives the bearer the right to sell a commodity (put option) or buy a commodity (call option) at a specified price for a specified future delivery date. Options are just like any other financial instrument, such as futures contracts, and are priced based on the market estimates of future prices,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

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

Implied volatilities (annual) 1989-2009



Implied volatilities (monthly) November 2006 to November 2009



Implied Volatilities: 1989-2009 and Nov-2006 to Nov-2009
The Black-Scholes model was used to compute implied volatilities from Chicago Board of Trade underlying data. Key inputs and assumptions are as follows: (i) 6-month time expiration on contracts; (ii) settlement premium for the call options 'at the money' i.e. with a strike price nearest to the settlement price for the futures contract associated with the call option contract (mid-monthly prices were used); (iii) option strike price; (iv) futures settlement price and (v) 6-month US treasury bill yields were assumed for the risk-free rate.

Implied volatilities for wheat and maize have been creeping up steadily over the past two decades. High implied volatility now appears to have become a more permanent feature in their markets than was the case in the past. The persistence of volatility reflects the continued uncertainty in how market fundamentals have unfolded and how they are likely to unfold. A detailed examination of the recent past, however, shows that implied volatility for both commodities may have stabilized and more importantly, reached a turning point.

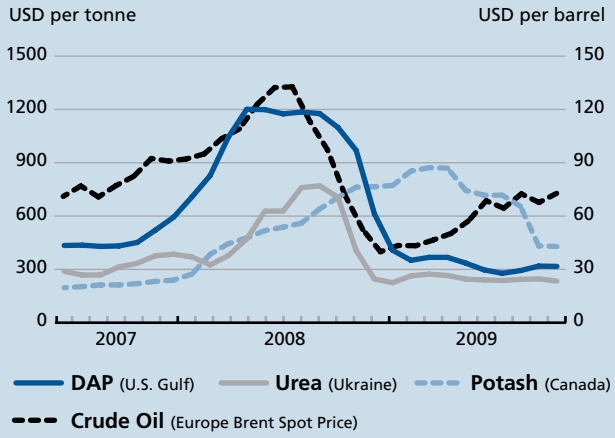
At the peak of the turmoil in international wheat markets, implied volatility for the commodity climbed to 55 percent and spiked again in March 2009, before falling to a two-year low in September. The evolution of implied volatility in the international maize and soybean markets tended to mirror that of wheat, but the degree of upward movement has been less pronounced: maize and soybean volatility surged in March of this year to around 45 and 46 percent, respectively, but since then has declined.

In November 2009, implied volatility stood at 35 percent for wheat, 31 percent for maize and 33 percent for soybeans. These percentages are a measure of the deviation in the futures price (six months ahead) from underlying expected values. Under reasonable assumptions, one can say 'the market estimates with 68 percent certainty that prices will rise or fall by 35 percent for wheat, 31 percent for maize and 33 percent for soybeans'. In a similar vein, the likelihood that prices will exceed their current values by more than 50 percent in six months time is perceived to have a probability of around 2 percent, in other words quite unlikely.

To put these indications into a wider perspective, implied volatility has undergone a gradual moderation in the past six months, suggesting that markets are a little more assured than they were last year.

Monthly fertilizers and oil prices (June 2007-September 2009)

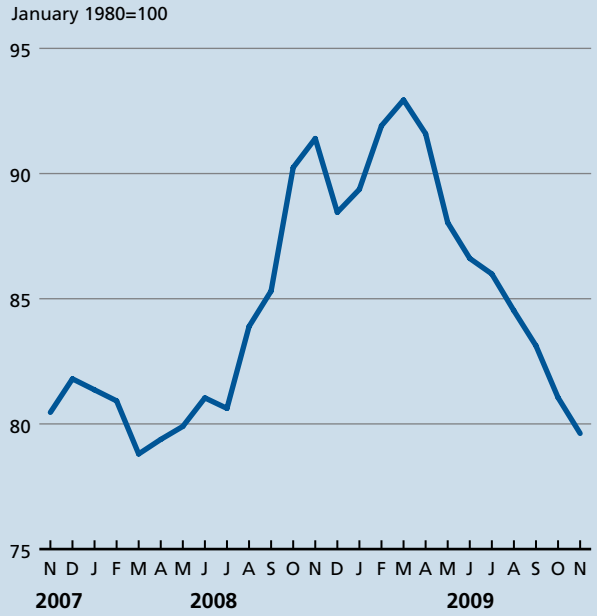
International fertiliser quotations have been subdued throughout much of 2009, with the decline in potash prices accelerating sharply in the second half of the year. In 2008, global fertilizer markets were severely disrupted by the imposition of export taxes on fertilizer products of up to 75 percent by China. In July 2009 they were lifted which quelled markets further. With stronger demand on the horizon for nitrogen and phosphate fertilizers and ingredients, prices are expected to return to an upward trend, especially nitrate-based products whose production costs are determined by crude oil prices.



Source: Compiled from the Fertilizer Week and Fertilizer Market Bulletin

Evolution of the US Dollar exchange rate [1] November 2007 to November 2009

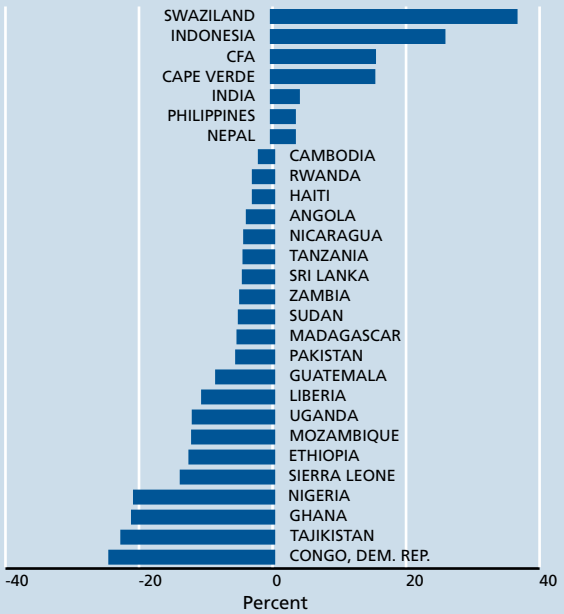
The US Dollar has experienced a fair degree of volatility over the past 12 months, but since March, it has fallen by roughly 15 percent against major currencies, which has put upward pressure on commodity prices in world markets.



[1] Price-adjusted major currencies US Dollar index
Source: US Federal reserve

Annual change in exchange rates of selected LIFDCs against the US Dollar as of September 2009 (%)

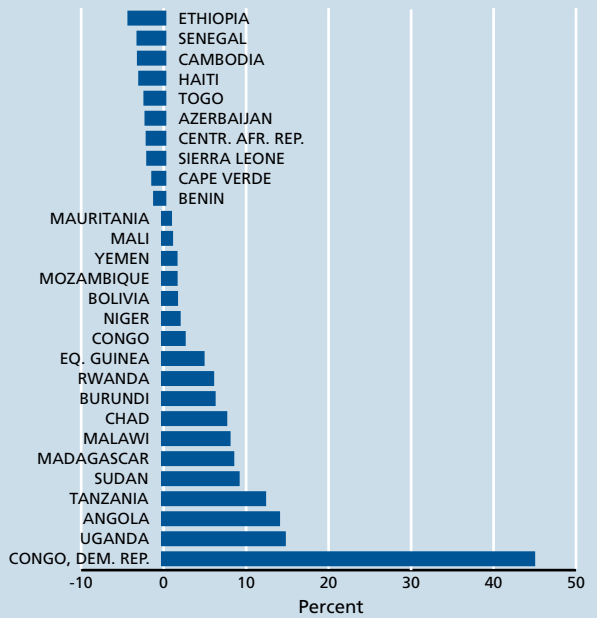
Numerous LIFDCs have seen their currency fall against the US dollar resulting in lower international purchasing power. In contrast, the exchange rate of countries tied to the Euro through the CFA in West and Central Africa, stand to benefit from a stronger currency.



Source: IMF

Change in Annual Consumer Price Indices of Selected LIFDCs as of September 2009 (%)

Consumer prices continue to rise in many vulnerable countries, compounding the economic hardships that their inhabitants already face, but in several of the lowest-income food deficit countries, prices have fallen from their levels a year ago, bringing some respite.

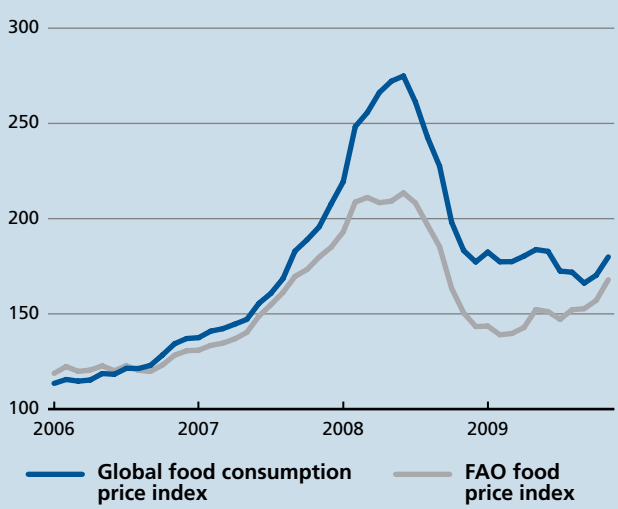


Source: IMF

THE FAO PRICE INDICES

Launched in the June 2009 issue of Food Outlook, the **FAO Global Food Consumption Price Index** tracks changes in the cost of the global food basket as portrayed by the latest FAO world food balance sheet (see http://faostat.fao.org/). Representative international prices for each of the commodities or commodity groups appearing in the balance sheet are weighted by their contribution to total calorific intake. The index fell to a 25 month low in September 2009, before gaining ground to almost 180 basis points in November. This implies that the cost of the typical food basket is now some 80 percent more than what it was in 2002/04. A slight recovery in cereal prices in recent weeks, which hitherto had been steadily falling, combined with a sharp rise in dairy product prices, has led to the index being more aligned to movements in the export weighted FAO Food Price Index.

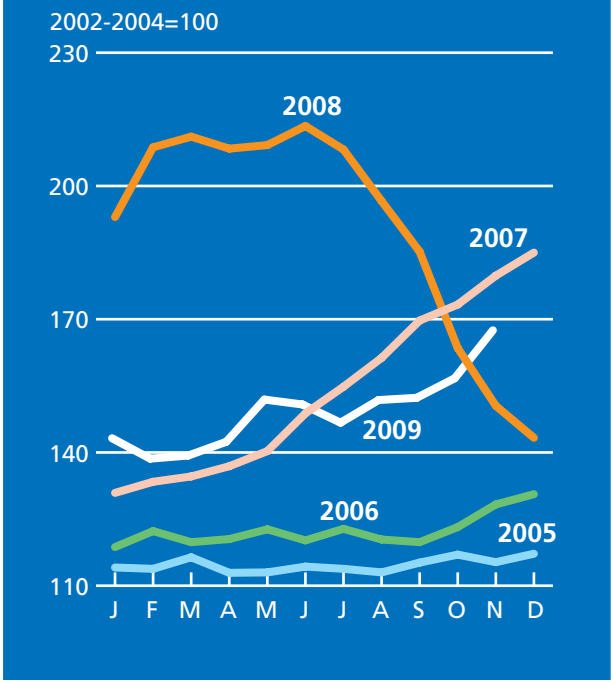
The FAO global food consumption price index and FAO food price index



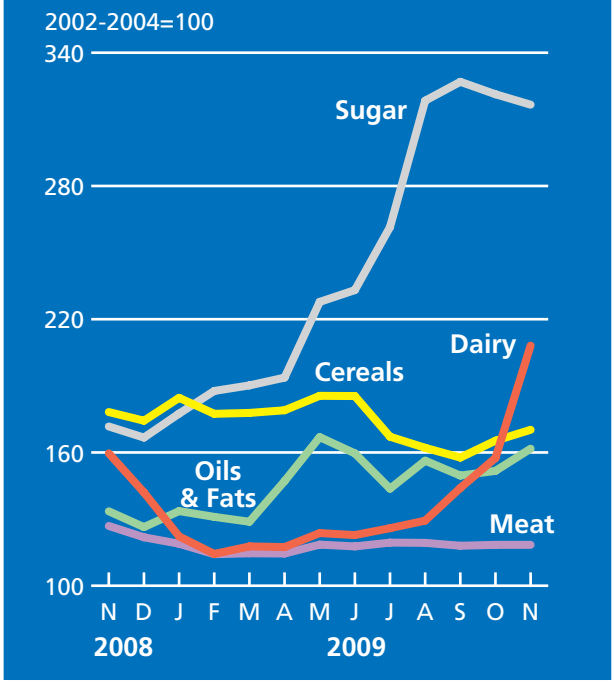
The **FAO Food Price Index (FFPI)** averaged 168 points in November 2009, up 7 percent from October. At this level, the FFPI stands at its highest level since September 2008 but still down 21 percent from its peak in June 2008. The FFPI has gained strength in recent months owing to increases in world prices of nearly all food commodities. The sharp rise in November reflected a continuing strong recovery in international dairy prices as well as higher oils and cereal prices. By contrast, international sugar prices dropped below their October highs while meat values remained unchanged.

The **FAO Cereal Price Index** averaged 170 points in November 2009, up almost 3 percent from October but down 38 percent from its April 2008 all time high of 274 points. The near record 2009 cereal crop and a continuing improvement in the level of world cereal inventories kept cereal prices below levels of last year. However, recent weeks have witnessed a renewed strength in the prices of major cereals, mostly on the back of delays in maize harvesting in the United States, anticipation of a decline in winter wheat plantings and stronger import demand for

FAO Food Price Index



Food Commodity Price Indices



rice than earlier anticipated. External developments have also been responsible, including a weakening of the United States Dollar, higher prices of soybeans and stronger energy markets.

The **FAO Oils/Fats Price Index** reached 162 points in November 2009, which is 6.6 percent above the October value. Excluding 2007-08, the period of the extraordinary price swing, the corresponding value in November 2006 was 124. The current price strength reflects strong import demand and active investment fund buying, that coincide with relatively tight export supplies, recovering mineral oil prices and further weakness in the United States currency. Recently, prices also reacted to weather related delays in oilseed planting in Argentina, one of this season's key sources of supply. The prospects of a continued strong demand and of a limited recovery in stocks during 2009/10 point toward prolonged price firmness in the sector.

The **FAO Index of Dairy Product Prices** has increased by over 80 percent from its low in February 2009. Prices in international dairy markets have undergone a significant recovery in recent months, rising some 33 percent in November alone. Most of the increase has occurred since August as economic recovery has taken hold in Asia and in certain oil exporting countries. Export supplies remain tight, particularly given only marginal increase in milk production in Oceania and lower output in the United States. A critical factor for global markets is the retention by the European Union of large Slim Milk Powder and butter stocks, which has restricted its exports.

The **FAO Sugar Price Index** reached 317 points in November 2009, down 1.5 percent from October. However, on average, the index in January-November 2009, at 250 points, was 37 percent higher than the corresponding period in 2008. While a gradual increase in sugar prices in 2009 was to be expected, given the tightening of the global market, the speed and magnitude of the run-up suggest an overreaction of the market to an expected surge of imports by India and to a poor outlook of crops in Brazil in 2009/10.

The **FAO Meat Price Index** hovered around 118 points between September and November 2009, substantially lower than the levels prevailing in the same period last year. Over January-November 2009, meat prices remained largely steady, averaging 117 points or 9 percent less than in the same period in 2008. The meat sector appears to have been hit most severely by the contraction in world demand ensuing from the economic downturn. Only prices of poultry meat have given some signs of recovery in recent months, a tendency that was not shared by pigmeat or bovine meat.

FAO Food Price Index

		Food Price Index[1]	Meat[2]	Dairy[3]	Cereals[4]	Oils and Fats[5]	Sugar[6]
2000		**90**	94	95	85	68	116
2001		**92**	94	107	86	68	123
2002		**90**	90	82	95	87	98
2003		**98**	99	95	98	101	101
2004		**111**	111	123	107	112	102
2005		**115**	113	135	103	104	140
2006		**122**	107	128	121	112	210
2007		**154**	112	212	167	169	143
2008		**191**	128	220	238	225	182
2008	November	**150**	127	160	178	133	172
	December	**143**	122	142	174	126	167
2009	January	**144**	119	122	185	134	178
	February	**139**	114	114	177	131	188
	March	**140**	115	118	178	129	190
	April	**143**	115	117	179	147	194
	May	**152**	118	124	186	167	228
	June	**151**	118	123	185	160	233
	July	**147**	119	126	167	144	261
	August	**152**	119	129	162	156	318
	September	**153**	118	144	158	150	327
	October	**157**	118	158	165	152	321
	November	**168**	118	208	170	162	317

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

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

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

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

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

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

Food Outlook is issued under the Global Information and Early Warning System on Food and Agriculture, by collaboration among services of the Trade and Markets Division and other FAO units. The International Grain Council contributes the Ocean Freight Rates section. Food Outlook provides information on latest developments in agricultural markets and sets the global and regional commodity production, utilization, trade and price context for food security. It is published twice a year in May/June and November/December. This issue is based on information available up to November 2009.

Food Outlook and other GIEWS reports are available on the internet as part of the FAO World Wide Web (www.fao.org) at the following URL address: http://www.fao.org/giews/. In addition, some of the GIEWS regular reports can be received by e-mail through automatic mailing lists: subscription information is available at http://www.fao.org/giews/english/listserv.htm. Other relevant commodity studies, technical documents and featured publications on a wide range of topical issues are available on the FAO TradeDivision web site at: http://www.fao.org/es/esc/en/index.html

FAO World Food Situation Portal

High food prices and market uncertainties have become a major global concern. As a result, access to up-to-date information and analysis is becoming increasingly important. FAO has created an internet portal that brings together all relevant studies produced by the Organization with the view to facilitate research on the current developments in world food markets. The portal, named World Food Situation, is accessible from the FAO main Web page at: www.fao.org/worldfoodsituation

GIEWS The Global Information and Early Warning System on Food and Agriculture

GIEWS continuously monitors crop prospects and food security situation at global, regional, national and sub-national levels and warns of impending food difficulties and emergencies. Established in the wake of the world food crisis of the early 1970's GIEWS maintains a unique database on all aspects of food supply and demand for every country of the world. The System regularly provides policy makers and the international community with up-to-date and accurate information so that timely interventions can be planned and suffering avoided.

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