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BIANNUAL REPORT ON GLOBAL FOOD MARKETS



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HIGHLIGHTS

From a global perspective, food markets are expected to remain generally well balanced in 2016/17 amid large export availabilities and relatively low and more stable international prices, especially for cereals. The world food import bill is set to dip to a six-year low, while still remaining above the USD 1 trillion mark.

WHEAT

Record world production and ample inventories keep international wheat prices at multiple-year lows. Large supplies of low quality wheat at competitive prices boost usage of wheat in feed rations. World trade in wheat in 2016/17 is likely to remain at record levels, with the Russian Federation emerging as the world's largest wheat exporter.

COARSE GRAINS

Global production to rebound in 2016, largely on anticipation of a record output in the United States. However, world stocks could decline somewhat, led by drawdowns in China, Brazil and South Africa. Large export availabilities are likely to keep international prices under downward pressure.

RICE

World rice production is predicted to expand in 2016 for the first time in three years, reaching a new record. In the absence of substantial sales, good crop prospects in the Northern Hemisphere weigh on international prices, with early expectations pointing to import demand remaining subdued in 2017.

CASSAVA

Cassava is set to resume its status as one of the fastest expanding food crops, with its production rebounding from last year. The significant contraction in international trade so far in 2016 has exposed the high vulnerability of cassava non-food sectors to developments in markets in which cassava competes, especially maize.

OILCROPS

Preliminary forecasts for 2016/17 point to a relatively balanced global supply and demand situation for both meals and oils. Global oil and meal output is anticipated to rebound, underpinned by a recovery in soybean and palm oil production, while world demand is expected to keep growing at a steady pace.

MEAT

Overall world meat production is predicted to remain at 320 million tonnes in 2016, with growth in many countries likely to be offset by a fall in output in China and Australia. Global meat trade is expected to recover, growing by 4.4 percent to 31.1 million tonnes.

DAIRY

International prices of dairy products have moved up since May, as ample export supplies were reduced. World milk production is expected to increase in 2016, even though unfavourable weather and reduced farmgate returns could constrain output in some countries.

FISHERIES

Global fish production is forecast to grow moderately in 2016, underpinned by sustained gains in aquaculture. After falling sharply in 2015 under the influence of a strong US dollar, the value of seafood trade is forecast to rebound this year. A tightening of supplies for major traded species and firming import demand may keep international seafood prices on the rise.

NAIROBI DECISION ON EXPORT COMPETITION

Despite a general rise since the beginning of 2016, international food commodity prices have remained well below their peak values and are not projected to return to those high levels over the next decade (OECD/FAO 2016). In this context, the Decision agreed at the 10th WTO Ministerial Conference, held in Nairobi in December 2015, to eliminate export subsidies can be important as it prevents members from reverting to their use.

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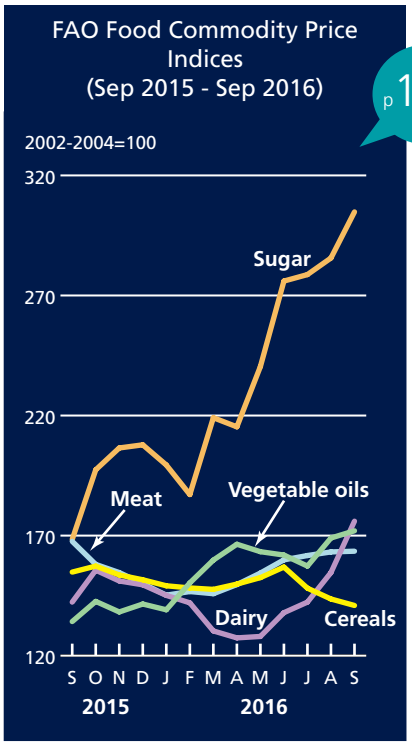
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MARKET SUMMARIES

CEREALS

A positive outlook for global cereal production in 2016, together with abundant stocks, points to a generally comfortable supply and demand balance in 2016/17.

In 2016, world cereal production is set to increase by 1.5 percent, or 38 million tonnes, to hit a new record of 2 569 million tonnes, topping by at least 5.5 million tonnes the previous peak of 2014. The current FAO forecast is 3.4 million tonnes higher than projected in September, with most of the upward revisions concerning wheat and rice. World wheat production in 2016 is expected to exceed the 2015 record by 1.2 percent, underpinned by output increases in India, the Russian Federation and the United States. Similarly, global rice production is forecast to grow by 1.3 percent, to an all-time high, driven by recoveries in Asia, as well as by gains in Africa and North America. Global production of coarse grains is set to rebound by 1.8 percent from last year's reduced level, mostly reflecting prospects for record maize crops in the United States, Argentina and India.

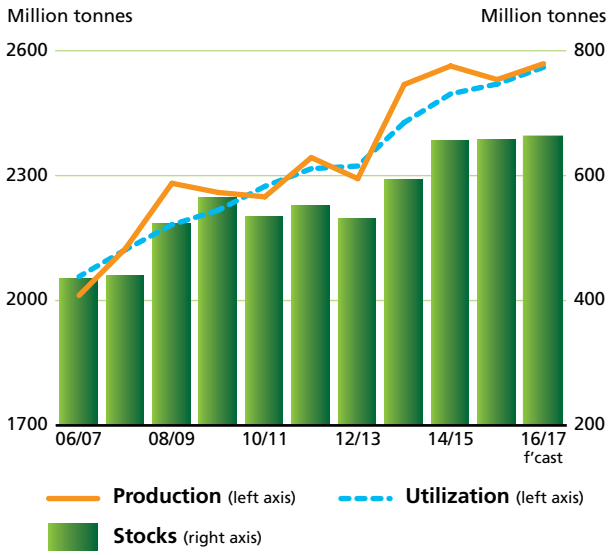
Global cereal utilization in 2016/17 is projected to expand by 1.6 percent to 2 560 million tonnes, with feed usage, in particular, seen increasing by 2.7 percent in 2016/17, amid large supplies of maize and low quality wheat. In spite of the projected year-on-year growth in total cereal utilization, the rise in world cereal production in 2016 would still result in an increase in the level of global cereal inventories. All would be in the form of wheat, as ending inventories of coarse grains and rice are anticipated to slide below their opening levels.

Although the world-stock-to-use ratios for wheat, coarse grains and rice are all estimated to decline somewhat in 2016/17, export availabilities are predicted to remain ample. This is particularly the case for coarse grains, which are likely to face a decline in import demand in 2016/17.

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CEREAL PRODUCTION, UTILIZATION AND STOCKS



WORLD CEREAL MARKET AT A GLANCE [1]

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
		million tonnes		%
WORLD BALANCE				
Production	**2 563.3**	**2 530.7**	**2 569.0**	**1.5**
Trade[2]	**378.6**	**394.1**	**384.8**	**-2.4**
Total utilization	**2 496.4**	**2 520.1**	**2 560.2**	**1.6**
Food	1 080.3	1 091.4	1 105.5	1.3
Feed	885.7	898.0	921.9	2.7
Other uses	530.4	530.7	532.9	0.4
Ending stocks[3]	**654.5**	**655.5**	**659.9**	**0.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	148.9	148.8	149.0	0.2
LIFDC[4] (kg/yr)	146.8	146.2	146.6	0.3
World stock-to-use ratio (%)	*26.0*	*25.6*	*25.2*	
Major exporters stock-to-disappearance ratio (%)	*17.9*	*15.8*	*15.9*	

FAO CEREAL PRICE INDEX (2002-2004=100)	2014	2015	2016 *Jan-Sep*	Change: Jan-Sep 2016 over Jan-Sep 2015 %
	192	162	149	-10.1

[1] Rice in milled equivalent.
[2] Trade refers to exports based on a July/June marketing season for wheat and coarse grains and on a January/December marketing season for rice.
[3] May not equal the difference between supply and utilization due to differences in individual country marketing years.
[4] Low-Income Food-Deficit countries.

WHEAT

The international wheat market in 2016/17 is likely to witness another season of abundant supplies, amid expectations of record production and rising stocks. At 742.4 million tonnes, FAO's current forecast for global wheat production in 2016 is 1.2 percent above the 2015 all-time high, with increases in India, the Russian Federation and the United States accounting for most of the year-on-year growth. This forecast is 1.6 million tonnes higher than the projection reported in September, largely reflecting improved crop prospects in Argentina and Australia.

The forecast for world wheat trade (including wheat flour in wheat equivalent) in 2016/17 (July/June) has been raised by 1.5 million tonnes since September, and now stands at 165 million tonnes, similar to the 2015/16 record. On a regional basis, wheat imports in 2016/17 are predicted to remain close to the previous season's levels. However, on the export side, an emerging feature is the anticipated emergence of the Russian Federation as the world largest wheat exporter, taking over from the EU which is expected to occupy a distanced second place, almost on par with the United States.

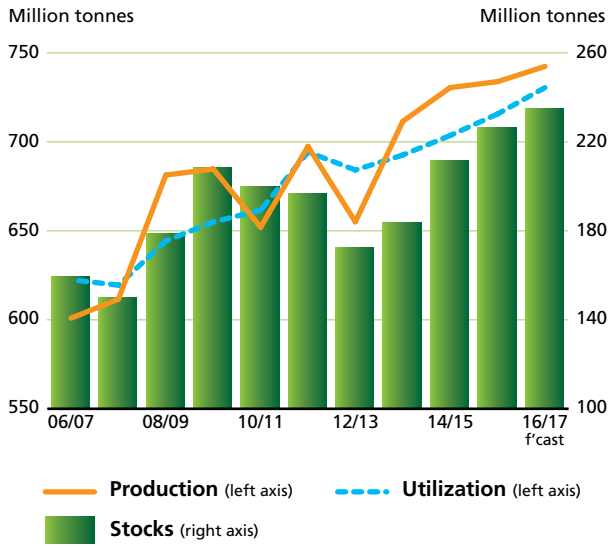
Total wheat utilization in 2016/17 is projected to reach 730.5 million tonnes, almost 15 million tonnes, or 2 percent, above the 2015/16 estimate. At 498 million tonnes, food consumption would continue to account for the bulk of global wheat utilization. On the other hand, the use of wheat in animal rations is forecast to increase by 6.2 percent to 146 million tonnes, reflecting the ample availabilities of low quality wheat at competitive prices.

World wheat stocks are forecast to increase further in 2016/17 and reach 234 million tonnes, up 8.4 million tonnes from their already elevated opening levels and the highest level since 2001/02. As a result, the world wheat stock-to-use ratio in 2016/17 would reach 31.7 percent, well above the historic minimum of 22.7 percent registered in 2007/08. Against this background, international wheat prices are likely to remain stable and relatively low during the 2016/17 season.

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WHEAT PRODUCTION, UTILIZATION AND STOCKS



WORLD WHEAT MARKET AT A GLANCE

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
		million tonnes		%
WORLD BALANCE				
Production	**730.5**	**733.8**	**742.4**	**1.2**
Trade[1]	**156.6**	**164.9**	**165.0**	**0.1**
Total utilization	**703.6**	**715.7**	**730.5**	**2.1**
Food	486.7	493.2	498.2	1.0
Feed	133.4	137.2	145.7	6.2
Other uses	83.5	85.3	86.5	1.4
Ending stocks[2]	**211.2**	**225.8**	**234.2**	**3.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	67.1	67.2	67.2	-0.1
LIFDC (kg/yr)	47.4	47.6	47.5	-0.4
World stock-to-use ratio (%)	*29.5*	*30.9*	*31.7*	
Major exporters stock-to-disappearance ratio[3] *(%)*	*16.7*	*16.6*	*17.4*	

FAO WHEAT PRICE INDEX[4] **(2002-2004=100)**	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
	181	144	126	-14.4

[1] Trade refers to exports based on a common July/June marketing season.
[2] May not equal the difference between supply (defined as production plus carryover stocks) due to differences in individual country marketing years.
[3] Major exporters include Argentina, Australia, Canada, EU, Kazakhstan, Russian Fed., Ukraine and the United States.
[4] Derived from the International Grains Council (IGC) wheat index.

COARSE GRAINS

Although world production of coarse grains is set to increase in 2016, the overall supply and demand outlook for 2016/17 suggests a slight tightening of the market compared to the previous season. However, with large export availabilities and weak import demand prospects, international coarse grain prices could remain subdued. World production of coarse grains in 2016 is forecast to rise by 1.8 percent from the reduced 2015 harvest. Record maize outputs in the United States and Argentina, along with gains in a number of other major producing countries, are likely to boost world maize production in 2016, despite expected sharp declines in Brazil, China and South Africa. World production of sorghum is also heading to an increase, with anticipated growth in Sudan and Mexico more than offsetting a reduction in the United States. By contrast, barley production is expected to fall below its 2015 level on smaller outputs in several countries, especially Morocco and Turkey.

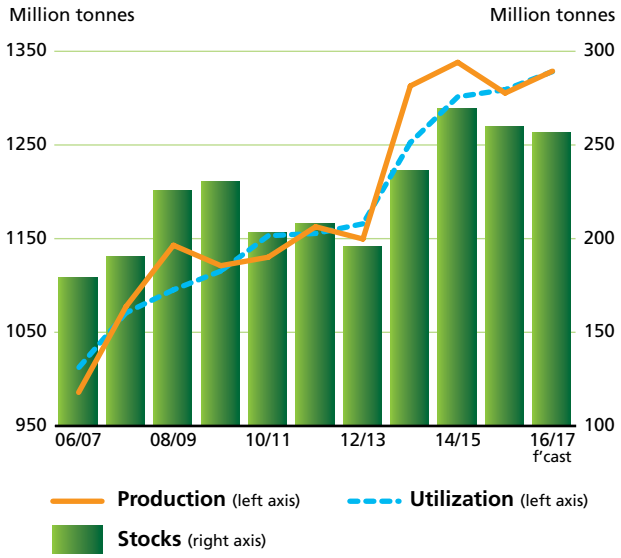
Global utilization of coarse grains is anticipated to grow by 1.5 percent in 2016/17, driven largely by higher uptakes of coarse grains for animal feeding and industrial use. The most significant expansion concerns maize, which could see much greater volumes fed to animals in the United States and China, supported by larger domestic supplies and more competitive prices than in the previous season. Relatively low prices are also likely to stimulate industrial uses, in particular of maize for the production of starch and biofuels.

A drawdown of coarse grain stocks might be required by the close of seasons in 2017, as, although increasing, total production in 2016/17 is anticipated to fall slightly short of projected utilization. A contraction in China, where the Government is aiming to reduce the size of its accumulated maize inventories, would be much behind the anticipated decline in global reserves. This would, in turn, cause a small drop in the world stocks-to-use ratio, to a level still indicative of a comfortable supply and demand balance. In fact, given the build-up of stocks in several major exporting countries, the ratio of major coarse grains exporters' closing stocks-to-their total disappearance (defined as domestic utilization plus exports) ratio, is set to increase. As this would signal a further easing of international market conditions, world prices are likely to remain under downward pressure for most of 2016/17.

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COARSE GRAIN PRODUCTION, UTILIZATION AND STOCKS



WORLD COARSE GRAIN MARKET AT A GLANCE

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
	million tonnes			%
WORLD BALANCE				
Production	**1 338.2**	**1 305.4**	**1 328.8**	**1.8**
Trade[1]	**177.3**	**185.8**	**176.0**	**-5.2**
Total utilization	**1 301.4**	**1 309.0**	**1 328.4**	**1.5**
Food	199.4	200.6	204.5	1.9
Feed	734.5	742.7	758.0	2.1
Other uses	367.5	365.7	365.9	0.1
Ending stocks[2]	**268.6**	**259.0**	**256.1**	**-1.1**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	27.5	27.3	27.6	0.8
LIFDC (kg/yr)	40.4	39.9	40.5	1.5
World stock-to-use ratio (%)	*20.5*	*19.5*	*18.7*	
Major exporters stock-to-disappearance ratio[3] *(%)*	*12.9*	*11.4*	*13.0*	

FAO COARSE GRAIN PRICE INDEX (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
	183	161	153	-5.6

[1] Trade refers to exports based on a common July/June marketing season.
[2] May not equal the difference between supply (defined as production plus carryover stocks) due to differences in individual country marketing years.
[3] Major exporters include Argentina, Australia, Brazil, Canada, EU, Russian Fed., Ukraine and the United States.

RICE

The 2016 season is unfolding favorably in the Northern Hemisphere, with abundant monsoon rains over Asia more than compensating for El Niño-related setbacks that occurred along or south of the Equator. As a result, forecasts of world rice production in 2016 have been upgraded to a record 497.8 million tonnes, up 6.3 million tonnes, or 1.3 percent, from the depressed outcome of 2015. If confirmed, this would mark the first year of global output growth since 2013. Much of the expansion is forecast to stem from recoveries in Asia, although sizeable gains are also foreseen in Africa and the United States.

After a combination of tighter export availability and subdued import demand depressed 2016 deliveries, early prospects point to world rice trade stagnating at 43.8 million tonnes in 2017. On the import side, improved local harvests may enable countries in the Far East and Latin America and the Caribbean to reduce imports, with good crops and depreciated currencies also tempering import growth in Africa. As for exports, an output recovery could help India boost its sales to international markets, primarily at the expense of lower deliveries by Thailand, consolidating India's position as the world's leading supplier of rice.

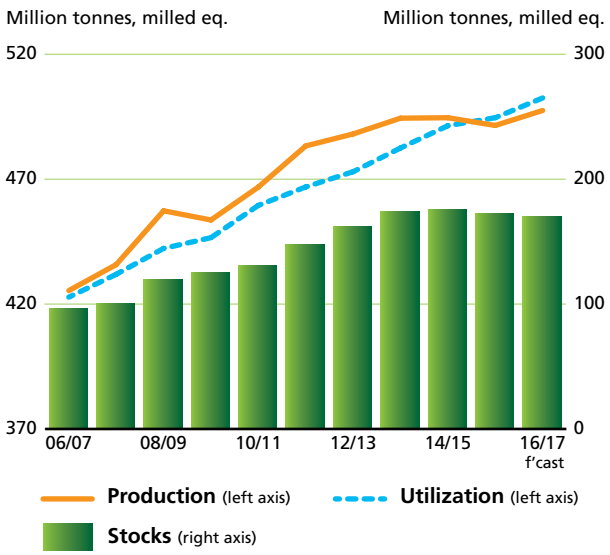
With expanding food use lifting total rice utilization over projected production in 2016, global rice reserves at the close of 2016/17 are anticipated to fall for the second successive season, reaching 169.6 million tonnes. India and Thailand are predicted to lead the 0.7 percent stock draw-down, but the fall is expected to be mitigated by accumulations elsewhere, especially in China (Mainland). Thus, at 33.2 percent, the global stock-to-use ratio in 2016/17 would continue to surpass the 30 percent mark it has consistently exceeded over the past five years.

A three-month upward trajectory in international prices came to an end in August, when a lack of substantial demand from traditional buyers, together with prospects of larger availabilities as a result of imminent crop harvests, began to weigh on quotations. This resulted in the September value of the FAO All Rice Price Index falling to 190 points, its lowest since January 2008.

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RICE PRODUCTION, UTILIZATION AND STOCKS



WORLD RICE MARKET AT A GLANCE

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
	million tonnes, milled equivalent			*%*
WORLD BALANCE				
Production	**494.6**	**491.5**	**497.8**	**1.3**
Trade [1]	**44.6**	**43.5**	**43.8**	**0.7**
Total utilization	**491.4**	**495.4**	**501.4**	**1.2**
Food	394.2	397.7	402.7	1.3
Ending stocks[2]	**174.7**	**170.7**	**169.6**	**-0.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	54.3	54.1	54.2	0.2
LIFDC (kg/yr)	59.0	58.7	58.7	0.0
World stock-to-use ratio (%)	*35.3*	*34.1*	*33.2*	
Major exporters stock-to-disappearance ratio[3] *(%)*	*24.2*	*19.3*	*17.3*	

FAO RICE PRICE INDEX (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
	235	211	196	-8.7

[1] Calendar year exports (second year shown).
[2] May not equal the difference between supply (defined as production plus carryover stocks) due to differences in individual country marketing years.
[3] Major exporters include India, Pakistan, Thailand, the United States and Viet Nam.

CASSAVA

World cassava production is forecast to recover in 2016, due to the return of more normal weather conditions as compared with last year, when El Niño marred yields in most growing regions. The crop's tolerance to erratic weather conditions, however, spared cassava from substantial output reductions, encouraging governments to put cassava expansion high on their agendas, especially in food insecure regions. Production prospects are also positive in countries with dietary diversification programmes or those aspiring to limit the imports of staples, particularly wheat and rice.

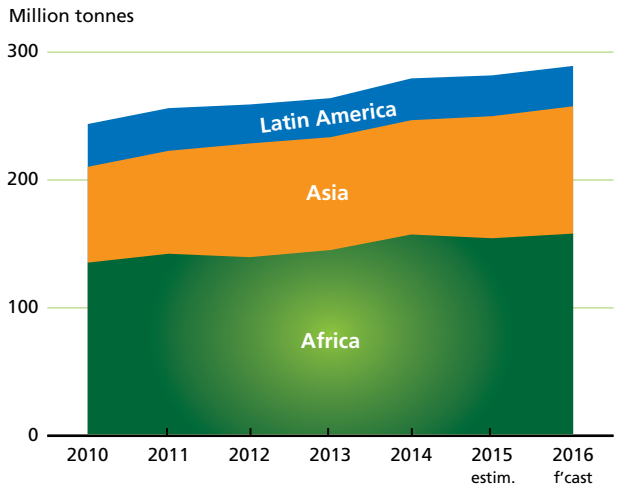
The volume of world trade in cassava in 2016 is expected to slump to a six-year low. International flows of cassava, primarily confined to East and Southeast Asia, are hugely contingent on industrial and feed demand, particularly from China, the world's leading cassava importer, and on the competitiveness of supplies in Thailand – the world's leading exporter. With policy change in China supporting the increased use of domestic substitutes from the country's stockpiles, principally maize, international demand for cassava has plummeted, accentuated by the relative thinness of cassava trade.

With China's maize inventories overhanging the entire regional market for cassava, the potential for cassava to compete in markets beyond China is also uncertain, given that international maize prices reached a multi-year low in September of this year. Consequently, cassava product quotations are being pressured considerably, and the likelihood of a further significant price correction will need to gather momentum if cassava sectors in the region are to remain commercially viable and if they are to compete in the international marketplace.

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WORLD PRODUCTION OF CASSAVA



WORLD CASSAVA MARKET AT A GLANCE

	2014	2015 *estim.*	2016 *f'cast*	Change: 2016
	million tonnes, fresh root eq.			%
WORLD BALANCE				
Production	**278.7**	**281.1**	**288.4**	**2.6**
Trade	**37.2**	**39.3**	**28.2**	**-28.4**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	20.7	20.7	21.0	1.5
Developing (kg/year)	34.11	33.88	34.26	1.1
LDC (kg/year)	70.5	66.1	67.1	1.5
Sub-Saharan Africa (kg/year)	114.4	109.2	108.8	-0.4
Trade share of prod. (%)	13.3	14.0	9.8	-30.2

CASSAVA PRICES [1] (USD/tonne)	**2014**	**2015**	**2016 *Jan-Sep***	**Change: Jan-Sep 2016 over Jan-Sep 2015**
Chips to China (f.o.b. Bangkok)	228.1	215.7	178.3	-17.3
Starch (f.o.b. Bangkok)	428.8	430.5	361.0	-16.2
Thai domestic root prices	72.4	70.0	51.3	-26.7

[1] Source: Thai Tapioca Trade Association

OILCROPS

After a tightening in market fundamentals in 2015/16, preliminary forecasts for the 2016/17 season point to a relatively balanced global supply and demand situation for both meals/cakes and oils/fats.

In 2016/17, global oilseed production is forecast to recover fully from last season's fall, possibly climbing to a new record. While the expansion would be led by soybeans, the other oilseeds are also anticipated to post sizeable gains, with the exception of rapeseed. Soybean growth would be concentrated in the United States, where record-high yields are set to boost output. In South America, production might grow only moderately, as farmers are expected to reduce soybean plantings in favour of competing crops. In China and India, production could expand, reversing the downward trend observed in recent years.

Growth in global palm oil output is forecast to resume, as palms in Southeast Asia begin to recover from the effects of adverse weather in 2015/16.

Based on current forecasts, world output and consumption of oils and meals would reach record levels in 2016/17. The current estimate for global meal uptake roughly matches that for global meal output, suggesting that global meal inventories would remain around last season's level. By contrast, global oil consumption is projected to outstrip production by a small margin, therefore pointing to a modest reduction of world oil reserves. While the global stock-to-use ratios for both oils and meals are forecast to fall by a small margin, the major exporters' stock-to-disappearance ratios could remain unchanged or even improve slightly.

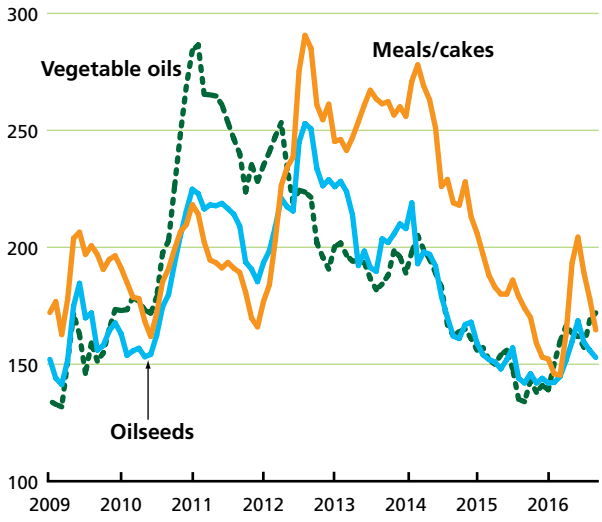
International trade in oils/fats is forecast to grow at a faster pace than last season, fueled by the anticipated recovery in palm oil production in Indonesia and Malaysia. The outlook is less buoyant for world meal trade, which could face slowing growth, mainly reflecting subdued import demand by China.

Regarding prices, after gaining strength earlier this year, international quotations for oils and meals entered, since June, a phase of instability. In the coming months, prices are expected to be much affected by developments impacting soybeans in South America and palm oil in Southeast Asia.

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FAO MONTHLY INTERNATIONAL PRICE INDICES FOR OILSEEDS, VEGETABLE OILS AND MEALS/CAKES (2002-2004=100)



WORLD OILCROP AND PRODUCT MARKET AT A GLANCE

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
		million tonnes		%
TOTAL OILCROPS				
Production	549	534.1	556.9	4.3
OILS AND FATS				
Production	210.8	207.3	216.5	4.4
Supply	247.3	246.3	250.5	1.7
Utilization	206.2	211.2	217.3	2.9
Trade	114.3	115.8	119.4	3.1
Global stock-to-use ratio (%)	*18.6*	*16.3*	*15.6*	
Major exporters stock-to-disappearance ratio (%)	*10.7*	*9.7*	*10.0*	
MEALS AND CAKES				
Production	141.1	137.9	143.9	4.4
Supply	162.6	164.1	168.1	2.4
Utilization	133.4	139.1	144.0	3.5
Trade	86.7	90.5	93.5	3.3
Global stock-to-use ratio (%)	*18.7*	*16.0*	*15.5*	
Major exporters stock-to-disappearance ratio (%)	*10.6*	*9.1*	*9.5*	

FAO PRICE INDICES (Jan/Dec) (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
Oilseeds	184	149	153	1.3
Meals/cakes	243	179	171	-8.0
Vegetable oils	181	147	160	7.3

NOTE: Refer to footnote 1 on page 40 and to table 1 on page 43 for explanations regarding definitions and coverage.

MEAT AND MEAT PRODUCTS

World meat production is anticipated to stagnate in 2016, rising by a meagre 0.2 percent to 319.8 million tonnes. While output is expected to rise particularly in the United States, the EU, Brazil, India, Mexico, Canada and the Russian Federation, a down-turn in meat production – especially in China, but also in Australia – would weigh on the overall trend. Excluding the last two countries, aggregate meat production of the rest of the world would rise by 1.4 percent.

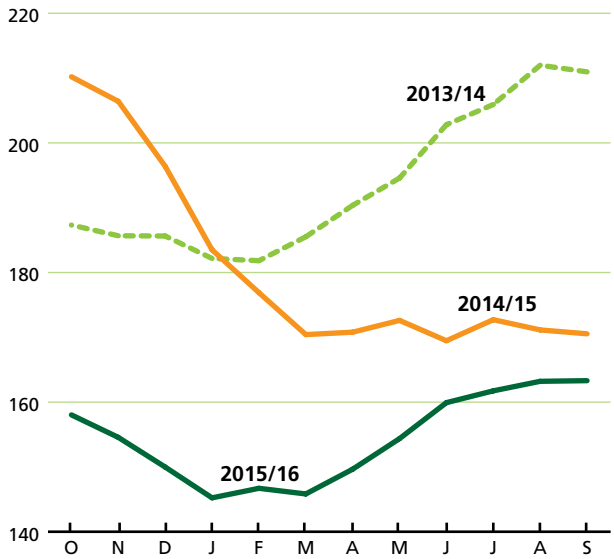
Global meat trade is forecast to recover in 2016, rising by 4.4 percent to 31.1 million tonnes. This would represent a return to trend, after a fall in 2015. Based on current expectations, trade in pigmeat is expected to increase by 10.8 percent, poultry meat by 4.4 percent and bovine meat by 0.3 percent, while ovine meat may decrease by 2.8 percent. Increased meat imports are expected particularly in China, but also in Japan, South Africa, Chile, the Republic of Korea, Mexico, the EU, Iraq, the Philippines, Viet Nam, the United Arab Emirates and the Russian Federation. By contrast, growth in domestic production may result in reduced imports by the United States and Canada, with Angola also anticipated to buy less. The expansion in world exports is projected to be led by Brazil and the EU, followed by the United States and Canada, with sales also rising for Belarus, Thailand, the Russian Federation, Paraguay, Mexico and Ukraine. Meanwhile, exports by Australia, China, Turkey, South Africa, New Zealand, Argentina and India are likely to be curtailed.

After remaining at a low level during the first three months of 2016, when it averaged 146 points, the FAO Meat Price Index recorded sustained growth between April and September, rising by 17.7 points, or 12.1 percent, to 163.5 points. Over the period January to September, the index gained 12.6 percent, supported by a surge in the prices of ovine meat, pigmeat and poultry meat, which, for the group, rose by 18.7 percent, and a more moderate increase of 4.3 percent for bovine meat. Limited supplies of pigmeat in the European Union and sheep meat from Oceania lent support to prices for these products, while firm international demand, in particular from Asia, underpinned poultry meat prices. Meanwhile, recovery in bovine meat production in the United States reduced the country's need for external supplies, contributing to international prices increasing less than for the other categories of meat.

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FAO INTERNATIONAL MEAT PRICE INDEX (2002-2004 = 100)



WORLD MEAT MARKET AT A GLANCE

	2014	2015 *estim.*	2016 *f'cast*	Change: 2016 over 2015
	million tonnes			%
WORLD BALANCE				
Production	**315.4**	**319.2**	**319.8**	**0.2**
Bovine meat	68.0	67.6	67.8	0.3
Poultry meat	111.0	114.8	115.8	0.9
Pigmeat	116.9	117.2	116.5	-0.6
Ovine meat	13.9	14.0	14.1	0.6
Trade	**30.7**	**29.8**	**31.1**	**4.4**
Bovine meat	9.6	9.1	9.1	0.3
Poultry meat	12.7	12.2	12.7	4.4
Pigmeat	7.1	7.2	8.0	10.8
Ovine meat	1.0	1.0	0.9	-2.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	43.2	43.2	42.8	-1.0
Trade - share of prod. (%)	*9.7*	*9.3*	*9.7*	*4.2*

FAO MEAT PRICE INDEX (2002-2004=100)	2014	2015	2016 *Jan-Sep*	Change: Jan-Sep 2016 over Jan-Sep 2015 %
	198	168	154	-10.6

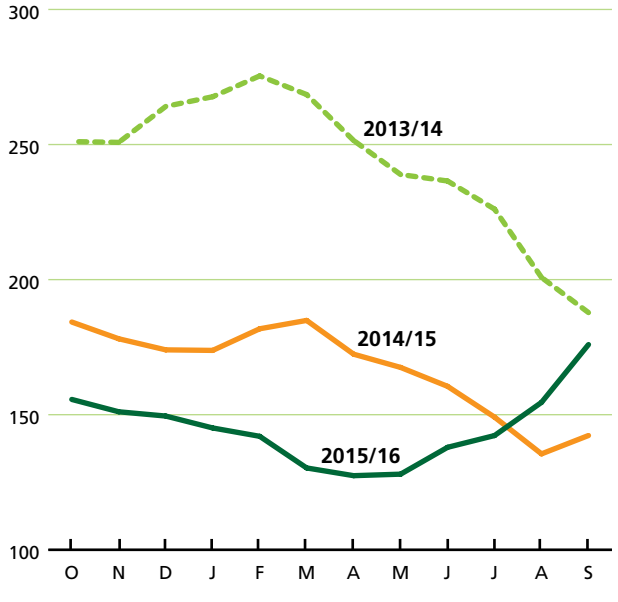
MILK AND MILK PRODUCTS

World milk production is forecast to grow by 1.1 percent to 817 million tonnes in 2016, with output set to expand in Asia and North and Central America, but to stagnate in Europe and Africa and decline in Oceania and South America. The removal of some excess export supplies in the EU and anticipation of tighter milk availabilities during the second half of the year caused international dairy prices to rebound between May and September.

Trade in dairy products in 2016 is projected to be almost unchanged, remaining at 72 million tonnes of milk equivalent. This stands in marked contrast to an average annual rate of increase of 6 percent for period 2009–2014. In 2015, a drop in shipments to China and the embargo by the Russian Federation on imports from specific countries impinged on international dairy product trade. For 2016, purchases by China and, to a lesser extent, the Russian Federation are projected to recover somewhat, with growth also foreseen for Brazil, the United States and Mexico. However, this is forecast to be largely counterbalanced by substantial reductions in imports by Venezuela and Algeria, and also by the United Arab Emirates, Nigeria, Singapore, Malaysia, Vietnam and Thailand. Overall, international trade flows in cheese and butter are anticipated to expand, while shipments of milk powders may fall.

Among exporters, the EU, New Zealand, Belarus and Uruguay are forecast to increase their sales. However, this is likely to be almost matched by a fall in shipments from the United States, Brazil and Argentina, while exports by Australia and Switzerland could be unchanged. Large purchases of skimmed milk powder (SMP) to intervention stocks so far this year are forecast to slow EU export expansion. Despite increased milk production, overall dairy sales by the United States are expected to fall, as export opportunities are curtailed by the strength of the US dollar and stiffer competition from other exporters.

FAO INTERNATIONAL DAIRY PRICE INDEX (2002-2004 = 100)



WORLD DAIRY MARKET AT A GLANCE

	2014	2015 *estim.*	2016 *f'cast*	Change: 2016 over 2015
	million tonnes, milk equiv.			%
WORLD BALANCE				
Total milk production	**793.7**	**808.7**	**817.2**	**1.1**
Total trade	**72.0**	**72.1**	**72.3**	**0.4**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	109.2	110.0	109.9	-0.1
Trade - share of prod. (%)	*9.1*	*8.9*	*8.9*	*-0.7*

FAO DAIRY PRICE INDEX (2002-2004=100)	2014	2015	2016 *Jan-Sep*	Change: Jan-Sep 2016 over Jan-Sep 2015 %
	224	160	143	-12.5

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FISH AND FISHERY PRODUCTS

After falling for much of 2015, international fish prices have given signs of a recovery in the first five months of 2016, while still remaining below their 2015 levels. According to the FAO Fish Price Index, international fish prices averaged 2 percent lower in the first six months of 2016 compared to the same period last year. The recent price strength, which extended to all the major species except for shrimps, generally reflected a tightening of supplies in some major exporting countries, combined with a stronger import demand.

Global fish production is forecast to grow by 1.8 percent to 174.1 million tonnes in 2016, boosted by a 5 percent expansion of aquaculture to 81.4 million tonnes, confirming the sector as the main engine for fishery growth, which compensated for a 1 percent contraction in wild fish output to 92.7 million tonnes.

Consumer demand for fish remains strong, with more people worldwide appreciating the health benefits of regular fish consumption. Direct human consumption, which accounts for more than 85 percent of all fish uses, is projected to grow by 2.3 percent to 152.8 million tonnes in 2016. This would result in a slight increase in per capita fish intake, from 20.3 kg in 2015 to 20.5 kg in 2016.

Although several exporters are likely to face supply constraints associated with El Niño, diseases and fishing quotas, the value of international fish trade may increase by 4 percent in 2016, recouping part of the losses registered in 2015.

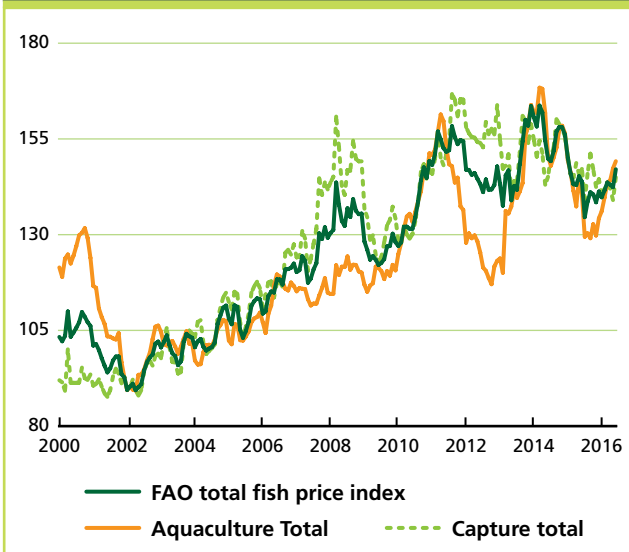
The recent FAO-UNCTAD-UNEP Joint-Statement[1], endorsed by more than 90 countries, international governmental organizations and active civil society organizations, highlighted the importance of having an international regulatory framework to streamline fishery subsidies. Any future regulation in this area will have a significant market-oriented impact on production patterns, prices and trade flows.

[1] Available at http://unctad.org/meetings/en/SessionalDocuments/U14ditc_d16_FishSub_Statement_en.pdf.

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FAO FISH PRICE INDEX (2002-2004 = 100)



Source: Norwegian Seafood Council (NSC)

WORLD FISH MARKET AT A GLANCE

	2014	2015 *estim.*	2016 *f'cast*	Change: 2016 over 2015
	million tonnes			%
WORLD BALANCE				
Production	**167.2**	**171.0**	**174.1**	**1.8**
Capture fisheries	93.4	93.5	92.7	-0.9
Aquaculture	73.8	77.5	81.4	5.0
Trade value (exports USD billion)	**148.3**	**134.1**	**140.0**	**4.4**
Trade volume (live weight)	**60.0**	**59.9**	**60.0**	**0.2**
Total utilization	**167.2**	**171.0**	**174.1**	**1.8**
Food	146.3	149.4	152.8	2.3
Feed	15.8	16.5	16.2	-1.8
Other uses	5.1	5.1	5.1	0.0
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/yr)	20.1	20.3	20.5	1.1
From capture fisheries (kg/year)	10.0	9.8	9.6	-1.8
From aquaculture (kg/year)	10.1	10.5	10.9	3.9

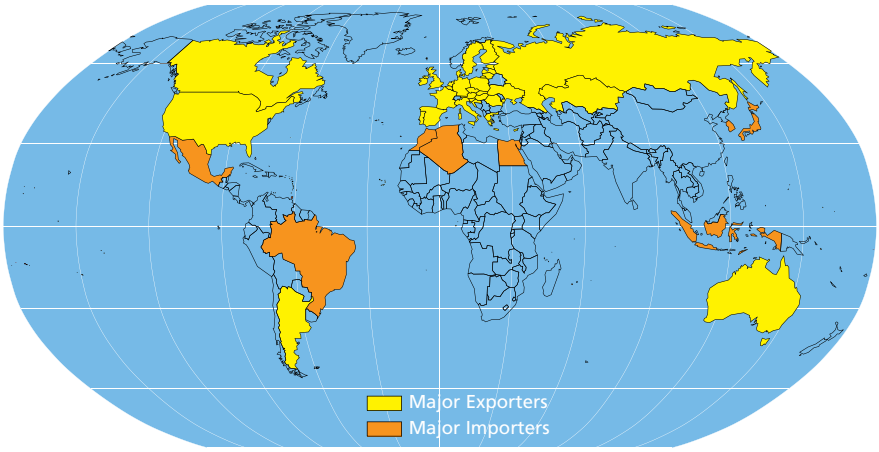
FAO FISH PRICE INDEX (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Jun*	**Change: Jan-Jun 2016 over Jan-Jun 2015 %**
	157	142	143	-1.6

Source: FAO Fish Price Index: Norwegian Seafood Council (NSC)
Totals may not add up due to rounding

MARKET ASSESSMENTS

WHEAT

Major Wheat Exporters and Importers



PRICES

International wheat prices drift lower on large world supply

Wheat prices have continued to drift lower since the start of the year, pressured by large supplies and generally good prospects for 2016 crops. Following a rebound from March to June, mainly caused by concerns about the weather, prices have resumed their downward trend. By September, the benchmark **US wheat, No.2 Hard Red Winter, f.o.b. Gulf**, averaged nearly USD 182 per tonne, down 15 percent from the start of the year and the lowest monthly average since June 2010. International wheat prices have fallen by more than 60 percent since their peaks in early 2008.

Amid expectations of a record global output for the fourth consecutive year and ample export supplies, wheat futures have also fallen sharply. Quotations for **December delivery** at **Chicago Board of Trade (CBOT)** have subsided 16 percent since the start of the year, hitting a ten-year low of USD 147 per tonne in September. Besides large harvests and ample export supplies, other factors have

Figure 1. IGC Wheat Price Index

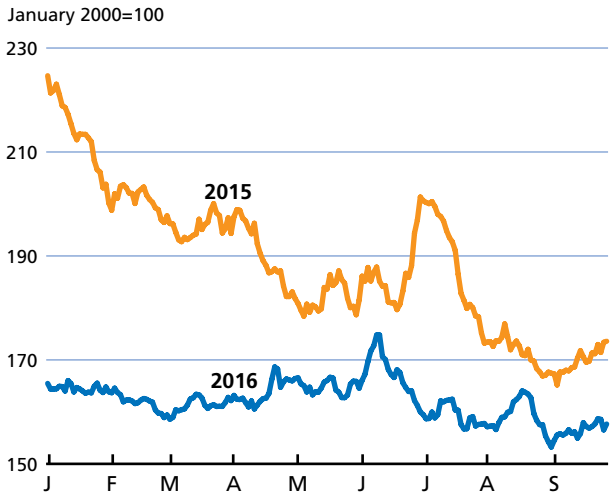
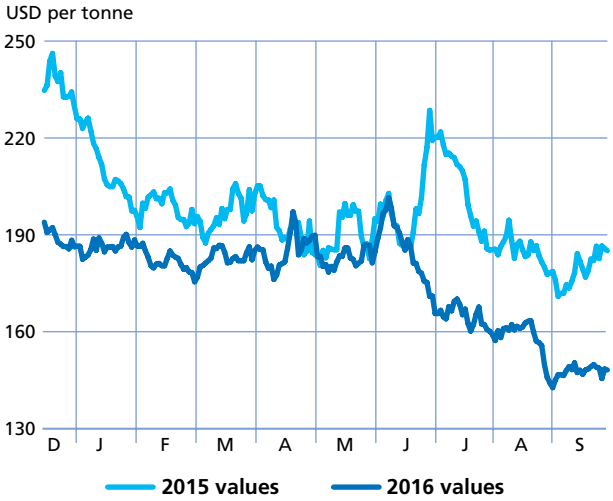


Figure 2. CBOT wheat futures for December



also exerted downward pressure on prices so far in the season, including earlier interruptions in wheat deliveries to Egypt, the world's largest wheat importer, because of uncertainties surrounding the official permissible tolerance level of ergot – a common fungus found in grains – in wheat shipments to the country. In recent weeks, larger than projected supplies in the Black Sea region have also weighed on export quotations. However, below-average protein levels in winter wheat, caused by untimely rains, in several major producing zones, have sustained export prices of milling quality wheat. More detailed analysis of the futures markets can be found in the Market Indicators section of this report.

PRODUCTION

Another record wheat crop in 2016

FAO's current forecast for global wheat production in 2016 stands at 742.4 million tonnes, which is 8.5 million tonnes, or 1.2 percent, above the 2015 estimate, with particularly large increases anticipated in India, the Russian Federation and the United States. This forecast is 1.6 million tonnes higher than was projected in September, reflecting an improved outlook for Argentina and Australia. Global wheat production has been on the rise for four consecutive years.

In the **United States**, better-than-expected yields from the later harvested crop have offset an overall price-induced reduction in plantings. As a result, official production estimates were raised to 63.2 million tonnes, which is 7.3 million tonnes, or 13.1 percent, above the previous year and an eight-year high. **Canada** is also expected to harvest a larger crop of almost 30.5 million tonnes, up 11 percent from 2015. The increase stems from a rebound in yields that more than compensated for a reduction in the area sown to the main spring wheat crop – a reduction partly due to a shift of planting to pulses.

In *Europe*, harvesting of the 2016 wheat crop is nearly complete. The latest indications for the **EU** point to a contraction of production of almost 17 million tonnes to 144 million tonnes in 2016. Much of the reduction rests on expectations of a lower output in France, where excessive rains depressed yields. In the **Russian Federation**, weather conditions have improved since the start of the season, boosting yield prospects. As a result, wheat production is now forecast at a record high of 69.5 million tonnes, 13 percent above the previous year. However, despite the improved production, the quality of the crop is reportedly poorer than in 2015. Dryness during the planting period curtailed sowings in **Ukraine**, contributing to a 3 percent decline in its 2016 production to 25.6 million tonnes.

Table 1. World wheat market at a glance

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
		million tonnes		%
WORLD BALANCE				
Production	**730.5**	**733.8**	**742.4**	**1.2**
Trade[1]	**156.6**	**164.9**	**165.0**	**0.1**
Total utilization	**703.6**	**715.7**	**730.5**	**2.1**
Food	486.7	493.2	498.2	1.0
Feed	133.4	137.2	145.7	6.2
Other uses	83.5	85.3	86.5	1.4
Ending stocks[2]	**211.2**	**225.8**	**234.2**	**3.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	67.1	67.2	67.2	-0.1
LIFDC (kg/yr)	47.4	47.6	47.5	-0.4
World stock-to-use ratio (%)	*29.5*	*30.9*	*31.7*	
Major exporters stock-to-disappearance ratio[3] *(%)*	*16.7*	*16.6*	*17.4*	

FAO WHEAT PRICE INDEX[4] **(2002-2004=100)**	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
	181	144	126	-14.4

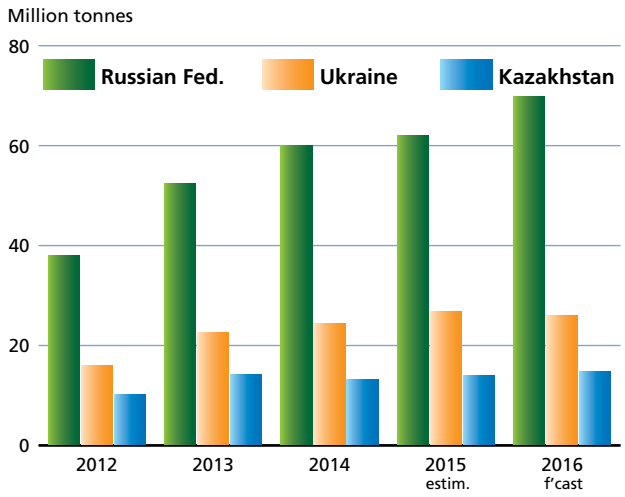
[1] Trade refers to exports based on a common July/June marketing season.
[2] May not equal the difference between supply (defined as production plus carryover stocks) due to differences in individual country marketing years.
[3] Major exporters include Argentina, Australia, Canada, EU, Kazakhstan, Russian Fed., Ukraine and the United States.
[4] Derived from the International Grains Council (IGC) wheat index.

Table 2. Wheat production: leading producers*

	2014	2015 *estim.*	2016 *f"cast*	Change: 2016 over 2015
		million tonnes		%
European Union	157.1	160.5	144.0	-10.3
China (Mainland)	126.2	130.2	128.6	-1.2
India	95.9	86.5	93.5	8.1
Russian Federation	59.7	61.8	69.5	12.5
United States	55.1	55.8	63.2	13.1
Canada	29.4	27.6	30.5	10.5
Pakistan	26.0	25.1	25.5	1.6
Ukraine	24.1	26.5	25.6	-3.4
Australia	23.7	24.2	28.1	16.1
Turkey	19.0	22.6	20.5	-9.3
Kazakhstan	13.0	13.7	14.5	5.5
Argentina	13.9	11.3	15.0	32.7
Iran Islamic Rep. of	10.6	11.5	12.5	8.7
Egypt	9.3	9.0	9.0	0.0
Other countries	67.4	67.4	62.4	-7.4
World	**730.5**	**733.8**	**742.4**	**1.2**

* Countries listed according to their position in global production (average 2014-2016)

Figure 3 . Major CIS producers



In *Asia*, the bulk of the harvest is complete and the regional 2016 output is expected to be above the 2015 level, at 322 million tonnes. Most of the increase reflects prospects of a recovery in **India**, where record yields more than compensated for a contraction in sowings prompted by reduced water supplies for irrigation. According to the latest official estimates, India's output might reach 93.5 million tonnes, 8 percent above the reduced 2015 harvest. In **Pakistan**, production in 2016 is estimated slightly above the bumper 2015 harvest, as weather-improved yields largely counterbalanced a modest decrease in plantings. Production in **China** is now foreseen to decline by about 1 percent in 2016, to 128.6 million tonnes, in contrast to a more buoyant outlook earlier in the season. The downgrading of the production forecast follows a period of poor weather, in the form of dry spells and excessive rains, which resulted in lower expected yields. In **Turkey**, dry conditions are expected to depress production in 2016 by 2 million tonnes, while the persistent conflict in **Syria** continues to severely undermine production in the country. In North Africa, severe dry weather resulted in a significant drop of wheat output in **Algeria**, but also in **Morocco,** now estimated to have harvested a well-below average crop of 2.7 million tonnes.

In the Southern Hemisphere, prospects for the 2016 wheat crop in **Australia** are favourable, due to adequate soil moisture conditions for planting and subsequent rains during July and August that benefited crop development. Although the area planted is estimated to have changed little compared to the previous year, better yield prospects are expected to boost production by 16 percent, to 28 million tonnes. In *South America*, the aggregate 2016 wheat production is forecast to rise by almost 22 percent to 25.2 million tonnes. Most of the growth is expected to derive from a 33 percent increase in **Argentina's** output, forecast at 15 million tonnes, reflecting a price-driven expansion in sowings. **Brazil** is also forecast to harvest a larger crop in 2016, for analogous reasons.

TRADE

World wheat trade in 2016/17 hovering around record levels

FAO's latest forecast for world wheat trade (including wheat flour in wheat equivalent) in 2016/17 (July/June) has been raised by 1.5 million tonnes since September, and now stands at 165 million tonnes, almost unchanged from the 2015/16 record estimate.

Total wheat imports by *Asia* are forecast at around 80 million tonnes, slightly above the previous season's level and nearly 1 million tonnes higher than had previously been anticipated. Wheat purchases by **Indonesia**, Asia's largest wheat importer, are currently projected at 10 million tonnes. Wheat imports by Indonesia have doubled over the past ten years underpinned by a growing demand for food as well as feed. Reacting to the rapid increase in feed wheat imports since last year and consistent with the country's maize self-sufficiency policies, the Government recently decided to suspend issuing import certificates for feed quality wheat, a decision that may result in reduced wheat imports by the country in 2016/17 than had been foreseen. In **Japan,** wheat imports are likely to increase by 500 000 tonnes, reaching 6 million tonnes in 2016/17, due to strong demand and despite a brief suspension of imports from the United States following reports of a possible presence of bioengineered wheat in US shipments. Wheat imports by **Thailand** are expected to reach 4.2 million tonnes, 1 million tonnes more than earlier forecast. Thailand's wheat imports have doubled since 2012/13, following the Government's decision to waive import tariffs, which particularly boosted imports of feed quality wheat. Purchases by **Saudi Arabia** are forecast to increase by 500 000 tonnes to 3.8 million tonnes, confirming the country's total reliance on world markets to meet its domestic needs following the termination, in 2015/16, of wheat production and the purchase programme. By contrast, deliveries to the **Islamic Republic of Iran** could decline by 1 million tonnes to a 4-year low of 2.2 million tonnes. Helped by large domestic supplies, the government halted all state wheat import purchases as of March 2016.

In *Africa*, aggregate wheat imports in 2016/17 are anticipated to remain close to last year's record level,

Table 3. Top 10 wheat importers*

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
Egypt	10.8	12.0	11.3
Indonesia	7.7	10.0	30.6
Algeria	7.3	8.0	9.0
EU	5.7	6.5	14.6
Brazil	6.6	6.0	-9.3
Japan	5.9	6.0	1.8
China	5.4	5.5	1.7
Mexico	4.6	4.4	-4.7
Korea Rep. of	4.5	4.4	-1.8
Iran Islamic Rep. of	4.6	2.2	-52.0

* Imports are based on a common July/June marketing season

Table 4. Top 10 wheat exporters*

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
Russian Fed.	19.5	29.5	51.2
EU	27.1	25.5	-6.0
United States	26.3	25.0	-5.0
Canada	21.0	21.5	2.4
Australia	19.0	19.0	-0.2
Ukraine	10.2	14.0	37.4
Argentina	6.6	9.0	36.4
Kazakhstan	7.6	7.0	-8.4
Turkey	3.4	4.4	29.3
India	3.6	1.0	-72.5

* Exports are based on a common July/June marketing season

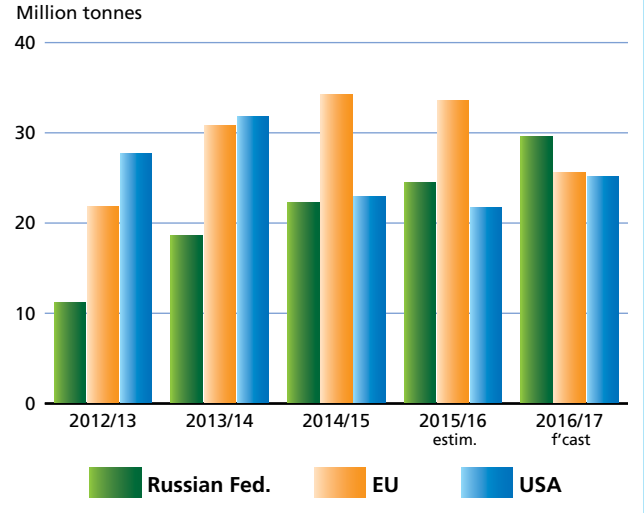
at just over 50 million tonnes. In *North Africa*, wheat imports are forecast to remain steady at around 29 million tonnes. Imports by **Algeria** and **Egypt** are likely to decrease marginally, to 8 million tonnes and 12 million tonnes, respectively. Following several months of slow activity, **Algeria** has accelerated its wheat purchases in the early months of the season. In **Egypt**, uncertainties surrounding tolerance rules on wheat containing ergot (a common fungus found in grains) slowed the pace of wheat purchase by the country since the start of the year. However, following the reinstating a 0.05 percent tolerance level, announced on 21 September, the pace of wheat deliveries to Egypt is expected to return to normal. Wheat imports by drought-stricken **Morocco** are forecast to reach 5 million tonnes in 2016/17, 500 000 tonnes more than in the previous season.

In *sub-Saharan Africa*, only **Ethiopia** is predicted to cut wheat imports significantly in 2016/17. Although the country is now anticipated to purchase 500 000 tonnes less than in the previous season, much will depend on whether the expectation of another above average wheat production season materializes. Wheat shipments to **Nigeria**, the sub-region's largest importer, are forecast at 4.5 million tonnes, unchanged from 2015/16.

In *Europe*, imports in 2016/17 may total 9.2 million tonnes, down marginally from the 2015/16 estimate. Wheat imports by the **EU** are currently put at 6.5 million tonnes, down 100 000 tonnes from 2015/16, but 500 000 tonnes more than last anticipated, due to quality concerns and tighter supplies of milling wheat following this year's poor harvest in France, the EU's largest wheat producer and exporter. In *Latin America and the Caribbean*, imports are forecast to be slightly lower than in the previous season, mostly on expectation of reduced purchases by **Mexico.** These are currently forecast to reach 4.4 million tonnes, down 400 000 tonnes from 2015/16 due to large domestic supplies. By contrast, imports by **Brazil** could increase to 6 million tonnes (on July/June basis).

Regarding exports, shipments from the **EU** are projected to fall to a 4-year low of 25.5 million tonnes following this year's reduced production and less competitive prices compared with other origins, in particular the Black Sea region. By contrast, helped by a bumper crop, wheat exports by the **Russian Federation** are set to increase by at least 21 percent to 29.5 million tonnes, making the country the world's largest wheat exporter in 2016/17. Because of large domestic supplies, the Russian Federation decided in August to suspend the wheat export duty until July 2018. Wheat shipments by **Australia** are seen

Figure 4. Major wheat exporters



to increase to 19 million tonnes, up 1 million tonnes from the previous forecast. Exports by the **United States** are projected to increase as a result of this year's rise in production and reach 25 million tonnes. The forecast for wheat exports by **Argentina** has been raised by 500 000 tonnes to 9 million tonnes, reflecting improved crop prospects. **Kazakhstan's** wheat exports are set to reach 7 million tonnes, up slightly from 2015/16 due to this year's increase in production. By contrast, wheat shipments by **Canada** may drop slightly, to 21.5 million tonnes. A more severe drop is anticipated in **Ukraine,** where sales could fall by 3.4 million tonnes to 14 million tonnes, because of a slightly reduced domestic production and, more importantly, increased competition by Australia in several Asian markets.

UTILIZATION

Global wheat utilization rising by 2 percent in 2016/17

Total wheat utilization in 2016/17 is projected to reach 730.5 million tonnes, 1.5 million tonnes higher than was anticipated earlier and almost 15 million tonnes, or about 2 percent, above the 2015/16 level. Total wheat use for **direct human consumption** is currently projected at around 498 million tonnes, 1 percent higher than in 2015/16. Most of the increase will be concentrated in developing countries, which are forecast to consume 363 million tonnes of wheat as food. On a per capita basis, wheat consumption in 2016/17 would remain close to 67 kg per annum worldwide, with an average of 60 kg per capita in the developing countries and 96 kg per capita in the developed countries. However, while the year-on-year growth in food consumption of wheat largely keeps pace with the world population growth, **feed use** of wheat tends to follow a more dynamic trend, very much influenced by its price competiveness vis-a-vis coarse grains in feed rations. Given this season's abundant supplies of low quality wheat, total feed use of wheat at the world level is forecast to rise to 146 million tonnes, up 8.5 million tonnes, or 6.2 percent, from 2015/16. The largest increases, in terms of volume, are projected for the United States, up 5.3 million tonnes, and several countries in Asia, especially China and Indonesia.

As for the other uses of wheat, the latest estimates by the International Grains Council (IGC) put total **industrial utilization** of wheat in 2016/17 at 22 million tonnes, slightly above last season. The biofuel sector is expected to absorb some 5.8 million tonnes of wheat in 2016/17, unchanged from 2015/16. However, the starch industry would continue to account for the bulk of the industrial usage of wheat, at 12.8 million tonnes, 3.9 percent higher than 2015/16, driven by strong increases in the EU and, to a lesser extent, Canada.

STOCKS

Global wheat inventories to reach their highest level since 2001/02

Another year of record wheat production is likely to result in a further accumulation of world inventories, which have been rising steadily since 2013/14. World wheat stocks are currently projected to reach 234 million tonnes by the close of the marketing seasons ending in 2017, up 8.4 million tonnes from their already elevated opening levels and the largest since 2001/02. This month's stock

Figure 5. Wheat feed use

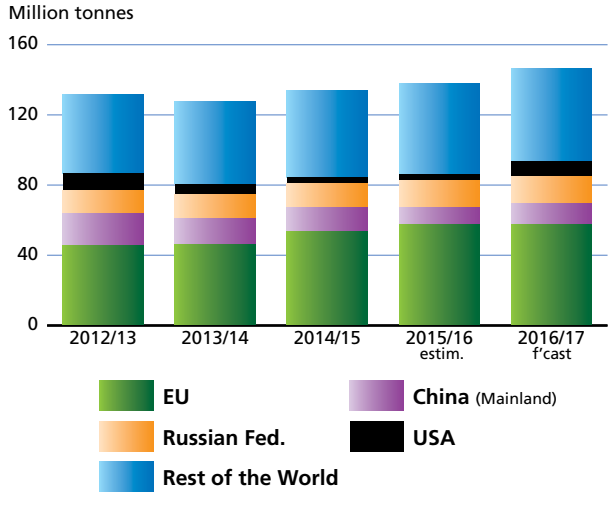
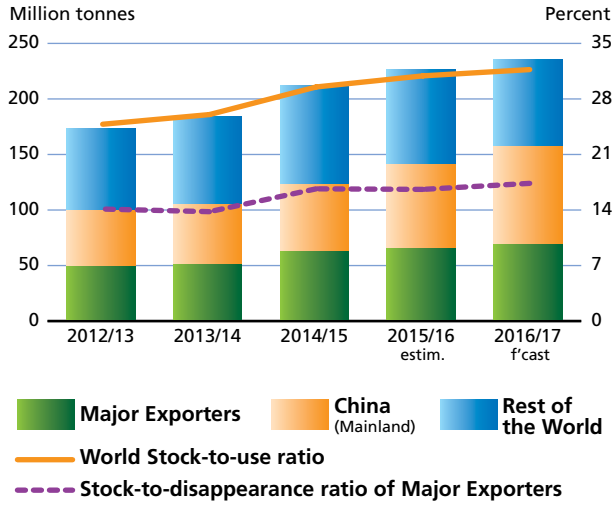


Figure 6. Wheat stocks and ratios



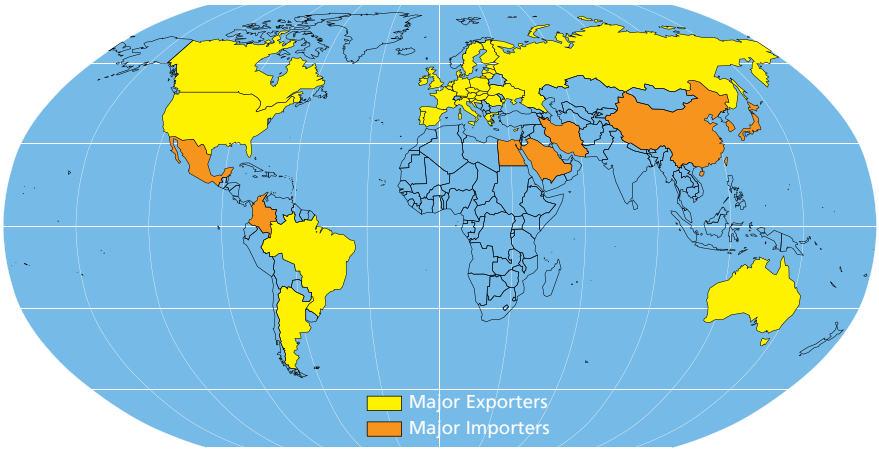
forecast is also 900 000 tonnes higher than the one reported in September, with much of the month-to-month revision reflecting upward adjustments to production estimates of several countries in *Asia*, in particular China and Pakistan.

Wheat inventories are projected to increase by a significant 11.9 million tonnes in **China**, 3.2 million tonnes in the **United States** and 1 million tonnes in **India**, as well as by nearly 1 million tonnes in **Australia** and **Ukraine**. By contrast, the tightening of supplies may require the **EU** to drawdown stocks by 4 million tonnes and **Morocco** by a 1.8-million tonnes. Likewise, **Egypt**, **India**, the **Islamic Republic of Iran**, **Iraq**, the **Syrian Arab Republic** and **Turkey** may end the season with smaller wheat reserves.

Based on the latest forecasts for global utilization and ending stock levels, the **world wheat stock-to-use ratio** is likely to hit its highest level since 2003/04 and rise to 31.7 percent in 2016/17. This would be well above the historic minimum of 22.7 percent registered in 2007/08. Moreover, given the build-up of inventories in several major exporting countries, the ratio of **major wheat exporters' closing stocks-to-their total disappearance** (defined as domestic utilization plus exports), which is considered a more robust indicator of supplies for international trade, is also set to increase, from 16.6 percent in 2015/16 to 17.4 percent in 2016/17.

COARSE GRAINS*

Major Coarse Grain Exporters and Importers



PRICES

International prices below last year on large export supplies and weak import demand

After a mixed start of the 2016/17 marketing year, characterized by weather uncertainties, tight export availabilities in *South America*, spill-overs from rising prices of soybeans and currency fluctuations, export prices of major coarse grains have witnessed a more definite downturn since June. Several factors contributed to this recent weakening, including the expectations of a record maize crop in the United States, large export availabilities in the Black Sea region and abundant world supplies of feed wheat in a context of generally frail global import demand. By September 2016, export prices from the US were well below their levels at the start of the year and in September last year. The benchmark **US maize price** (**yellow, No. 2, f.o.b.**) averaged USD 148 per tonne in September

Figure 1. Maize export price (US No. 2 yellow, Gulf)

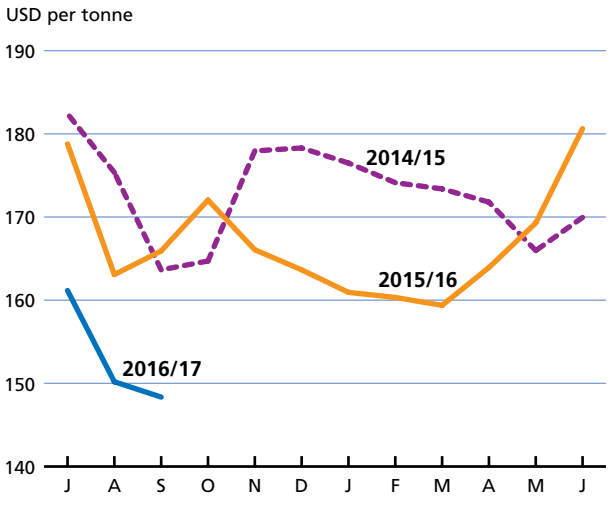
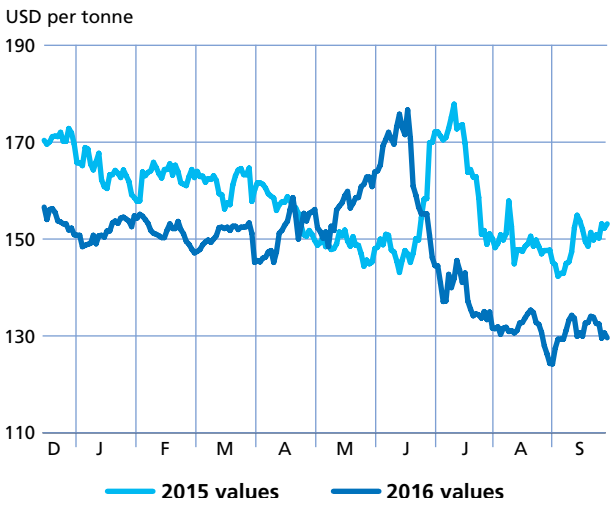


Figure 2. CBOT maize December futures



** Coarse grains include maize, barley, sorghum, millet, rye, oats and NES (not elsewhere specified)*

2016, down 8 percent from January and 11 percent compared to one year ago.

As for the other major coarse grains, barley and sorghum prices weakened considerably in recent months, trading below last year's levels. Much reduced imports by China had the most bearish influence on both markets, with feed barley quoted at least 10 percent below last year, also due to good production prospects in Australia.

Ample supplies also weighed on the prices of futures, with the **CBOT maize futures** for December 2016 delivery averaging around USD 129 per tonne in September, down 17 percent from the start of the year. Anticipation of a record soon-to-be-harvested crop in the United States and China's active selling of state reserves through auctions further contributed to the downward trend. More detailed analysis of the futures markets can be found in the Market Indicators section of this report.

PRODUCTION

Strong rebound in global production of coarse grains in 2016

Global coarse grains production in 2016 is forecast to reach 1 329 million tonnes, slightly less than predicted in September, but still 1.8 percent (23.4 million tonnes) above the reduced 2015 crop. Much of the projected increase rests on expectations of a rise in maize production in the United States and Europe.

World production of maize in 2016 is currently forecast at 1 029.3 million tonnes, 1 million tonnes less than anticipated in September, but 2.3 percent (23.3 million tonnes) above the previous year. The forecast for maize production has been reduced since September mainly due to deteriorating crop prospects in **Brazil**. The year-on-year increase in world maize production is mainly reflective of improved prospects for the **United States** and, to a lesser extent, for *Europe*. With the harvest underway, the United States is forecast to garner a record maize crop of 383 million tonnes, about 11 percent up on the previous year. The yearly gain mainly reflects beneficial weather that is expected to boost yields to near-record levels. In **Canada**, the recent arrival of rains failed to reverse the impact of earlier dryness on yields and, as a result, maize production is expected to decline by as much as 9 percent from last year.

In *Europe*, the outlook for the **EU** 2016 maize crop was recently downgraded, following hot and dry weather. Nonetheless, EU production is likely to recover by a marked 8.6 percent from the 2015 drought-affected harvest to reach 63 million tonnes. Similarly, **Ukraine's** maize output is set to rebound by 12 percent from 2015's reduced level on improved yields. A smaller increase is forecast for the **Russian Federation**, on account of an expansion in plantings reflecting improved price expectations.

In *Asia*, aggregate production in 2016 is forecast to fall. The decrease almost entirely rests on an expected 7.6-million-tonne (3.4 percent) decline in **China** to 217 million tonnes. This results from a contraction in sowings, as farmers shifted from maize cultivation to more profitable crops, following the Government's decision to abandon the procurement programme for maize. Improved weather conditions are expected to sustain a recovery of maize crops in **India**, but also in **Cambodia** and the **Philippines**. In the *Near East*, dry conditions in **Turkey** instigated a 6.3 percent production decline, although the 2016 crop is still estimated at an above-average level of 6 million tonnes.

Figure 3. Coarse grain production and area

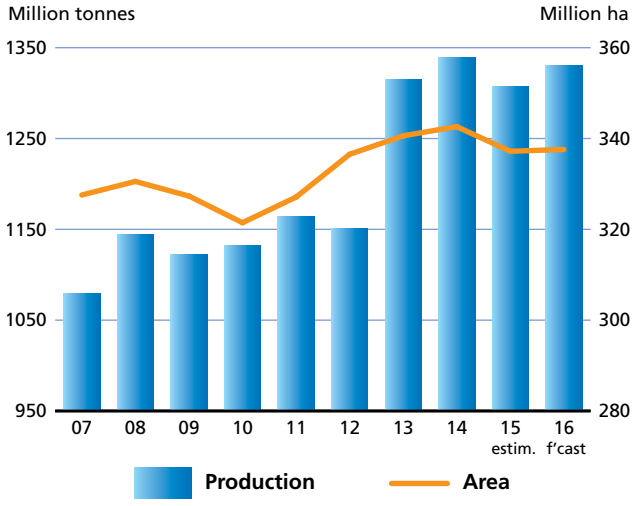


Figure 4. Major maize producers

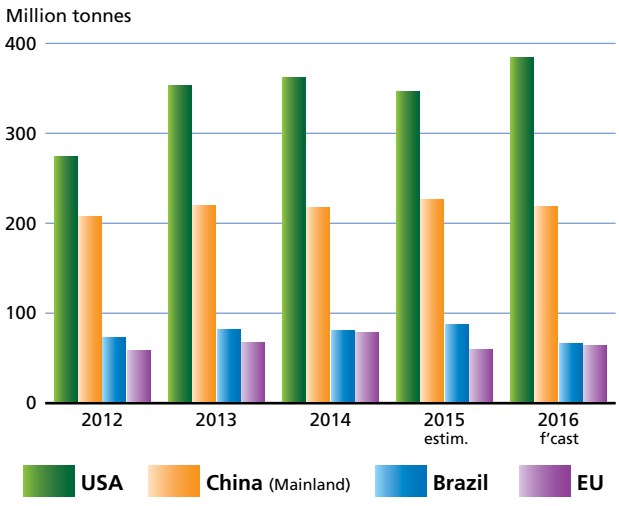


Table 1. World coarse grain market at a glance

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
		million tonnes		%
WORLD BALANCE				
Production	**1 338.2**	**1 305.4**	**1 328.8**	**1.8**
Trade[1]	**177.3**	**185.8**	**176.0**	**-5.2**
Total utilization	**1 301.4**	**1 309.0**	**1 328.4**	**1.5**
Food	199.4	200.6	204.5	1.9
Feed	734.5	742.7	758.0	2.1
Other uses	367.5	365.7	365.9	0.1
Ending stocks[2]	**268.6**	**259.0**	**256.1**	**-1.1**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	27.5	27.3	27.6	0.8
LIFDC (kg/yr)	40.4	39.9	40.5	1.5
World stock-to-use ratio (%)	*20.5*	*19.5*	*18.7*	
Major exporters stock-to-disappearance ratio[3] *(%)*	*12.9*	*11.4*	*13.0*	

FAO COARSE GRAIN PRICE INDEX (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
	183	161	153	-5.6

[1] Trade refers to exports based on a common July/June marketing season.
[2] May not equal the difference between supply (defined as production plus carryover stocks) due to differences in individual country marketing years.
[3] Major exporters include Argentina, Australia, Brazil, Canada, EU, Russian Fed., Ukraine and the United States.

Table 2. Coarse grain production: leading producers*

	2014	2015 *estim.*	2016 *f"cast*	Change: 2016 over 2015
		million tonnes		%
United States	377.6	367.2	401.7	9.4
China (Mainland)	225.2	234.5	227.3	-3.1
European Union	171.7	150.0	155.7	3.8
Brazil	82.9	88.3	67.7	-23.3
Argentina	39.9	42.4	47.3	11.7
India	43.1	38.1	43.7	14.7
Russian Federation	42.4	39.5	40.1	1.5
Ukraine	39.7	33.4	36.9	10.6
Mexico	31.8	30.8	32.5	5.7
Canada	22.1	25.7	24.8	-3.8
Nigeria	19.5	19.2	20.2	5.3
Indonesia	19.0	19.6	19.4	-1.1
Ethiopia	19.2	18.8	19.0	1.2
Turkey	12.9	15.1	13.4	-10.9
Australia	11.7	12.9	13.8	7.7
Other countries	179.6	170.0	165.3	-2.8
World	**1338.2**	**1305.4**	**1328.8**	**1.8**

* Countries listed according to their position in global production (average 2014-2016)

In *South America*, maize production in **Argentina** is forecast to increase by 6 million tonnes, putting the latest estimate at 39.8 million tonnes, a record high. The increase mainly stems from a larger planted area, as farmers responded to more attractive maize prices, prompted by the removal of export controls and a weaker currency. By contrast, following continual downward revisions this year, due to the adverse impact of dry weather, particularly on the second season "de safrihna" maize crop, **Brazil** is predicted to harvest its smallest crop since 2011. The latest estimate puts Brazil's 2016 crop at 65.5 million tonnes, 23 percent down from the bumper output of the previous year. In *Central America and the Caribbean*, aggregate production is set to rise from the drought-reduced level of 2015. This is mainly on account of **Mexico**'s 2016 output, which is forecast to increase to 25.7 million tonnes, as improved weather conditions resulted in bumper yields for the winter crop. Elsewhere in the subregion, higher rainfall volumes this year are foreseen to result in moderate production recoveries compared to the reduced 2015 crops.

In *Africa*, aggregate regional production is forecast to decline in 2016, mostly reflecting steep reductions in southern African countries that were affected by severe drought conditions. The bulk of this decline is attributed to **South Africa**, where the prolonged El Niño-induced drought caused a near 4 million tonne cut in the 2016 harvest compared with the already below-average output of the previous year. Maize outputs are also estimated to have fallen sharply in neighbouring countries, similarly on account of rainfall deficits, except in **Zambia** where the maize harvest increased by 10 percent. Production gains are anticipated in **Ethiopia** and **Nigeria**, where good rains so far have favoured crop development.

Global production of barley in 2016 is forecast at 142.5 million tonnes, 3.3 percent (4.9 million tonnes) down on the previous year. The decrease stems almost entirely from lower crops in **Morocco** and **Turkey** resulting from dry weather. The forecast for world sorghum production stands at 64.5 million tonnes, 2.3 percent (1.4 million tonnes) up on the previous year. Predominantly behind this year's improved crop are larger outputs in **Ethiopia** and the **Sudan**, which helped compensate for near 3 million tonne decrease in the **United States**.

TRADE

International trade in coarse grains to contract in 2016/17

World trade in coarse grains in 2016/17 (July/June) is set to fall to 176 million tonnes, down as much as

5 percent (9.7 million tonnes) from the 2015/16 record estimate. The contraction is predicted to concern all the major coarse grains, with trade in *maize* falling by almost 3 percent (4.1 million tonnes) from the record 2015/16 level to 135.5 million tonnes; *barley* shrinking by 8 percent (2.4 million tonnes) to 27 million tonnes; and *sorghum* by 29 percent (3.4 million tonnes) to 8.5 million tonnes. By contrast, trade in *millet* is projected to surge by 29 percent (200 000 tonnes) to 866 000 tonnes, while the volumes of *oats* and *rye* trade are predicted to remain largely unchanged from the 2015/16 levels, at 2 million tonnes and 359 000 tonnes, respectively.

In *Asia*, total imports of coarse grains in 2016/17 are forecast to drop by as much as 12 percent (11.9 million tonnes) to 90 million tonnes. Most of the decrease reflects lower anticipated purchases of maize, but also of barley and sorghum, by **China**. Total coarse grain imports by the country in 2016/17 are forecast at 11.3 million tonnes, a drop of 49 percent (nearly 11 million tonnes) from 2015/16. Recent policy measures to halt the purchasing and stockpiling of maize by the Government, combined with an increase in auctioning from state reserves, have contributed to narrowing the gap between domestic and world prices, thus making the importation of all coarse grains less attractive. Imports by the **Islamic Republic of Iran** are forecast to decline by around 1 million tonnes, to 6.5 million tonnes, mostly on reduced maize purchases for the first time in three years. Total imports of coarse grains by **Saudi Arabia** are also set to decrease, by 500 000 tonnes, to 13.2 million tonnes. As a leading importer of the commodity, Saudi Arabia's barley imports in 2016/17 are forecast at 9.7 million tonnes, 300 000 tonnes below the estimated record volume in 2015/16, but still 8.7 percent above the 5-year average. A slight decrease in imports is projected for the **Republic of Korea**, as some maize purchases could be substituted with competitively priced feed wheat. By contrast, deliveries of barley to **Turkey** are anticipated to rise from 300 000 in 2015/16 to 800 000 tonnes in 2016/17, following this season's sharp fall in domestic production. Increased volumes of barley and sorghum purchases may slightly raise coarse grain imports by **Japan**, to 17.6 million tonnes, as maize imports are expected to remain unchanged at around 15 million tonnes.

In *Africa*, total coarse grain imports are forecast to rise to 30 million tonnes in 2016/17, some 11 percent (3 million tonnes) more than in 2015/16, with most of the increase concentrated in Morocco and South Africa, which both face larger requirements following domestic production shortfalls. In **Morocco**, purchases of barley are forecast to nearly double in 2016/17 to 1.5 million tonnes, because of a drop in production, with those of maize also rising to meet the overall domestic feed demand. In **South Africa**, normally a leading regional maize exporter, maize imports in 2016/17 are likely to reach 3.5 million tonnes, exceeding the previous season's high level. Among other countries, maize purchases by **Malawi** and **Zimbabwe** are forecast to approach 650 000 and 955 000 tonnes, respectively, significantly above the already high levels attained in 2015/16, because of falling production in 2016 in both countries. Maize deliveries to **Egypt**, Africa's largest importer, are likely to remain close to the 2015/16 estimate of 8.5 million tonnes.

Imports by countries in *Latin America and the Caribbean* are forecast to hover around the 2015/16 level, with decreases in several countries *in Central America and the Caribbean* offsetting an increase in *South America*. Among countries buying less coarse grains in 2016/17 is **Mexico**, due to higher domestic production. The country is forecast to import 14.6 million tonnes, down 300 000 tonnes from 2015/16, but still some 26 percent above the 5-year average. On the other hand, maize imports by **Brazil**, normally a major maize exporter, are seen to soar to 2 million tonnes, up 1.3 million tonnes from 2015/16. Brazil's sharp decline in this year's production, combined with large exports earlier in the year, have led to tight market conditions and high domestic prices, thus necessitating large external supplies until the arrival of the second harvest. Total imports in *Europe* are forecast at around 14.1 million tonnes, down 1.4 million tonnes from the 2015/16 estimated level. Most of the decrease is expected to be concentrated in the **EU**, given the expected recovery in this year's maize production and large supplies of low protein wheat.

As for exports, a sharp contraction in world trade, such as the one projected for 2016/17, would have normally resulted in big cuts in exports by major exporters. However, an emerging feature this season is the tight export availabilities in a number of exporting countries (in particular **Brazil** and **South Africa**) due to their own production shortfalls. As a result, other exporting countries (such as **Argentina** and the **United States**) are expected to be able to greatly increase their exports and even expand their market shares despite shrinking world trade volume. With maize supplies very much curtailed following the poor 2016 production, shipments from **Brazil** are forecast to decrease by as much as 17 million tonnes (47 percent) to a five-year low of 19 million tonnes, while, at just 700 000 tonnes, maize exports from **South Africa** could fall below last season's below-average level. By contrast, large supplies are anticipated to boost coarse grain sales from the **United States** to a 9-year high of almost 61 million tonnes,

Table 3. Top 10 maize importers

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
Japan	14.9	15.0	0.8
Mexico	10.3	13.4	29.8
EU	11.0	12.0	9.4
Korea Rep. of	9.2	10.0	8.6
Egypt	7.3	8.5	15.8
Vietnam	4.0	7.7	94.1
China	8.5	6.1	-28.1
Iran Islamic Rep. of	5.1	5.0	-1.2
Colombia	4.1	4.6	11.6
Algeria	3.7	4.2	13.4

* Imports are based on a common July/June marketing season

Table 4. Top 10 maize exporters

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
United States	39.8	54.0	35.6
Argentina	17.7	24.0	35.9
Brazil	23.0	19.0	-17.4
Ukraine	16.7	18.3	9.6
Russian Federation	3.2	4.5	41.6
Paraguay	2.6	2.6	-0.7
EU	2.7	2.5	-7.4
Serbia	1.7	2.0	15.4
India	3.1	0.8	-73.9
South Africa	1.8	0.7	-61.8

* Exports are based on a common July/June marketing season

Table 5. Top 5 sorghum importers

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
China	4.4	5.1	15.1
Japan	1.2	0.8	-34.8
Mexico	0.9	0.6	-40.3
Chile	0.3	0.3	-2.7
Colombia	0.4	0.3	-32.8

*Imports are based on a common July/June marketing season

Table 6. Top 5 sorghum exporters

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
United States	5.2	6.2	19.7
Australia	1.1	0.9	-16.5
Argentina	1.7	0.7	-57.6
Ethiopia	0.4	0.4	0.0
Ukraine	0.1	0.1	-57.9

* Exports are based on a common July/June marketing season

Table 7. Top 10 barley importers

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
Saudi Arabia	8.9	9.7	8.7
China	4.9	4.6	-6.1
Iran Islamic Rep. of	1.4	1.5	5.5
Morocco	0.5	1.5	215.5
Japan	1.2	1.3	5.3
Lybia	0.5	1.0	85.0
Algeria	0.6	0.9	39.7
Jordan	0.8	0.8	-7.6
Tunisia	0.5	0.6	10.5
United States	0.4	0.5	2.6

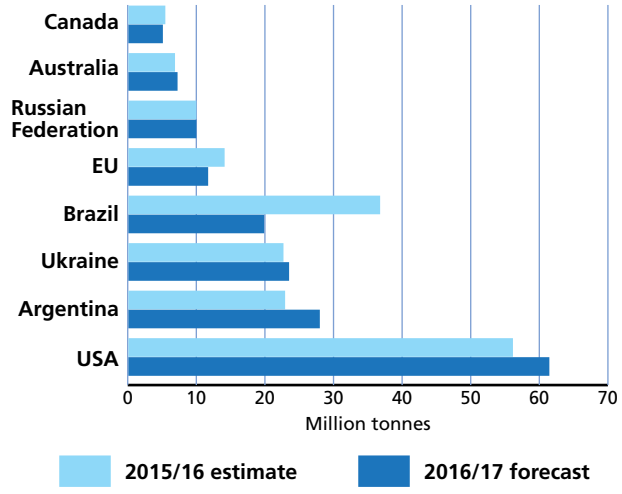
*Imports are based on a common July/June marketing season

Table 8. Top 10 barley exporters

	2011/12-2015/16 average	2016/17 f'cast	Change
	million tonnes		%
EU	6.8	8.0	17.4
Australia	5.4	5.4	0.4
Russian Federation	3.6	4.5	26.6
Ukraine	3.2	4.2	31.1
Argentina	2.9	2.4	-16.7
Canada	1.4	1.3	-7.4
Kazakhstan	0.5	0.5	0.7
India	0.4	0.3	-20.4
United States	0.3	0.3	-0.2
Uruguay	0.1	0.1	0.0

* Exports are based on a common July/June marketing season

Figure 5. Coarse grain exports: major exporters



of which 54 million tonnes in the form of maize, up 18 percent from 2015/16. Similarly, the 2016 record production may boost **Argentina's** maize shipments to an all-time high of 24 million tonnes, 29 percent more than in 2015/16. Exports of coarse grains from the **EU** are projected to contract, because of lower sales of barley. Indeed, in spite of large supplies, total exports of barley (feed) from the EU could decline to 8 million tonnes, 2.8 million tonnes less than 2015/16, reflecting ample availability of more competitively priced barley from other export origins; **Australia**, the **Russian Federation** and **Ukraine**, in particular.

UTILIZATION

Large supplies and lower prices driving up total utilization

World total utilization of coarse grains in 2016/17 is projected to reach 1 328 million tonnes, an increase of 1.5 percent (19.4 million tonnes) over 2015/16. The latest forecast is 4.6 million tonnes higher than anticipated in September, mainly due to upward revisions of feed usages of barley, maize and sorghum in several countries.

World **feed utilization** of coarse grains in 2016/17 is forecast at 758 million tonnes, up 2.1 percent, or 15.3 million tonnes, from 2015/16. Maize use as feed is likely to reach 592 million tonnes, 3.1 percent, 18 million tonnes, above the 2015/16 estimate. The United States and China are likely to register the largest increases in coarse grains feed usage in 2016/17. In the United States, it is forecast to reach 149 million tonnes (of which 143 million tonnes of maize), up 8.3 percent (11.5 million tonnes) from 2015/16, underpinned by the record 2016 production. In China, the elimination of Government maize purchases and stockpiling is anticipated to boost domestic feed as well as industrial uses of maize, despite a reduction in this year's production. China's maize feed use is currently projected at 151 million tonnes, up 3.8 percent (5.5 million tonnes) from 2015/16. By contrast, feed use of maize could contract in the EU, mainly because of large supplies of poor quality wheat. Declines are also projected for Brazil and South Africa, due to poor domestic production and high domestic prices.

Total **industrial use** of coarse grains is projected to increase by 1.8 percent, to 310 million tonnes in 2016/17. Of these, 155 million tonnes are anticipated to be consumed for biofuel production, up 1.5 percent from the 2015/16 estimate; and 104 million tonnes for the production of starch, 2.7 percent more than in 2015/16. As with feed use, the largest expansions are predicted for the United States and China, and especially with regard to maize. The growth in overall industrial utilization of barley and sorghum is likely to remain subdued.

World **food consumption** of coarse grains is forecast to increase in 2016/17 by 1.9 percent, or 3.9 million tonnes, to 205 million tonnes. This would imply a stable average per capita consumption level of around 27.6 kg per year. While their direct human consumption is less significant globally than that of other cereals, coarse grains are an important source of food in Latin America and the Caribbean. They also constitute a main staple food in Africa, with average per capita consumption at 73 kg per year.

Table 9. Maize use for ethanol (excluding non-fuel) in the United States

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16* *(estim.)*	2016/17 *(f'cast)*
				Thousand tonnes					
Maize production	307 142	332 550	316 166	313 956	273 188	351 270	361 101	345 479	366 536
Ethanol use	93 396	116 616	127 538	127 005	117 886	130 155	132 085	132 085	133 990
Yearly change (%)	21	25	9.4	-0.4	-7.2	10.4	1.5	0.0	1.4
As % of production	30	35	40.3	40.5	43.2	37.1	36.6	38.2	36.6

Source: WASDE-USDA. * 12 September 2016

Figure 6. Coarse grain utilization

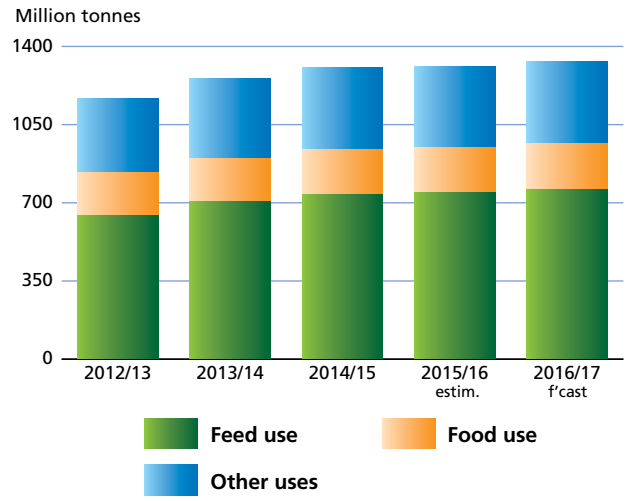
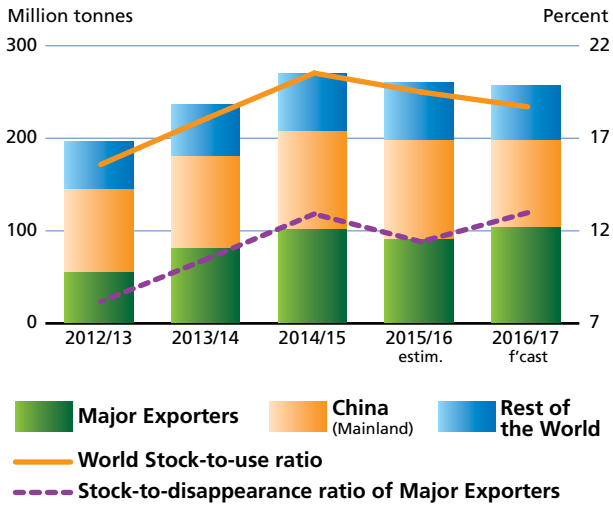


Figure 7. Coarse grain stocks and ratios



STOCKS

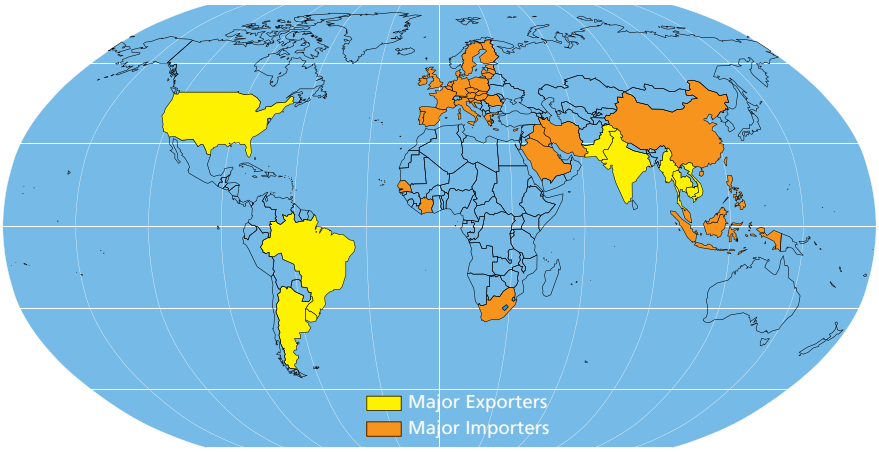
Small decline projected for world inventories of coarse grains

FAO's latest forecast of world stocks of coarse grains by the close of seasons in 2017 stands at 256 million tonnes, a decrease of 1.1 percent (2.9 million tonnes) from their relatively high opening level and 8.5 million tonnes lower than was reported in September. This month's downscaling largely reflects lower estimates for maize ending stocks and, to a lesser extent, barley inventories. Based on the latest forecasts, the world **stocks-to-use ratio** for coarse grains in 2016/17 is estimated to decline slightly from the previous season to 18.8 percent, still well above the historical low of 15.4 percent registered in 2003/04. The largest year-on year drawdown is forecast for China, where, with this year's anticipated decline in maize production and higher domestic use, coarse grain stocks could fall by as much as 13.2 million tonnes, or 12.4 percent.

By contrast, the **ratio of major exporters' closing stocks to their total disappearance** (defined as domestic utilization plus exports), considered a better indicator of global availabilities for trade, is set to increase from 11.4 percent in 2015/16 to 13.0 percent in 2016/17. The reason for the higher value of the ratio is the expectation of a surge in the end-of-season inventories mostly in the United States, the world's leading maize exporter. On the back of this year's record maize crop, coarse grain stocks in the United States are forecast to rise by some 17 million tonnes to nearly 65 million tonnes, or as much as a quarter of the world total. By contrast, inventories in several other exporters are likely to decline, especially in Brazil, where this year's cut in production might curb end-of-season maize stocks by half, to around 3.5 million tonnes.

RICE

Major Rice Exporters and Importers

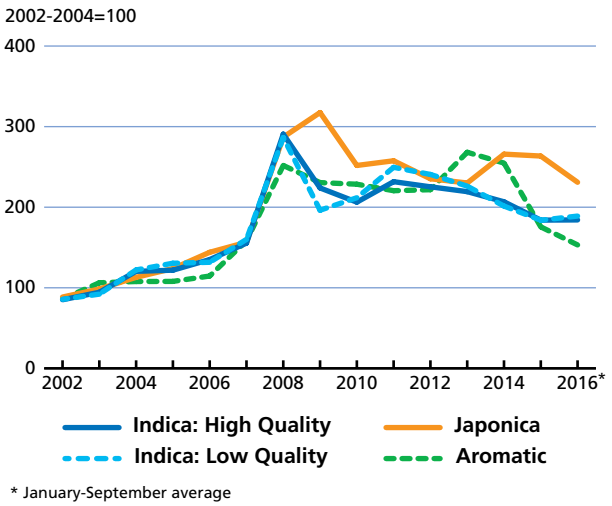


PRICES

International rice prices resume their downward trajectory

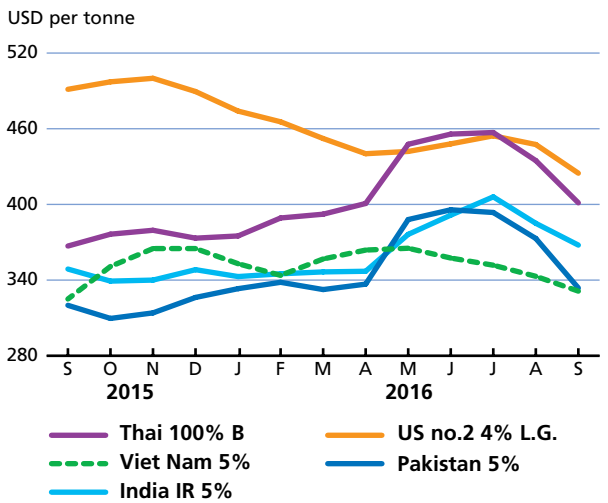
International rice prices resumed their downward trajectory in August 2016, after rising steadily since May, as availabilities in the major rice exporters dwindled, following back-to-back poor harvests. The tendency for prices to weaken stretched into September, when new crop arrivals compounded a sluggish pace of sales, as demand from traditional major buyers was held back due to good local availabilities or constraints posed by restrictive policies and weak local currencies. As a result, the FAO All Rice Price Index fell to 190 points in September, down 3 percent from August and registering its lowest level since January 2008. The weak market sentiment was pervasive, but particularly heavy falls were registered in Thailand. Benchmark Thai 100% B white rice traded at USD 399 per tonne in September, down 11 percent from May – a decline aided by successive large auctions of supplies from government stocks. Looking at the various segments, the price strength evidenced between May and July concerned long-grain

Figure 1. FAO rice price indices



* January-September average

Figure 2. Export prices for higher-quality Indica rice in selected countries



varieties, keeping the January–September averages of the Indica sub-indices close to their corresponding 2015 levels. Amid more adequate availabilities, lackluster demand tended to weigh more heavily on quotations of medium/short grain rice and of fragrant varieties, resulting in the January–September averages of the Japonica and Aromatica indices falling 14 and 17 percent below their respective 2015 levels.

PRODUCTION

Production to hit a new record, as abundant rains boost output prospects in Asia

After a difficult start to the 2016 season, which saw numerous producing countries along or south of the Equator negatively impacted by the lingering influence of El Niño, the return to El Niño/La Niña-neutral conditions in May ensured a more normal climatic unfolding of the season in the Northern Hemisphere. This was particularly the case in Asia, where main crops, now at the harvest stage, benefitted from plentiful monsoon rains. As a result, world rice production in 2016 is now forecast to reach a record of 497.8 million tonnes, up 1.9 million tonnes from September expectations and 6.3 million tonnes over the 2015 depressed outcome. If confirmed, this would mark the first year of global output expansion since 2013, an achievement that would come on account of a 1.4 percent expansion in plantings to 163.1 million hectares and a robust average global yield of 4.6 tonnes of paddy per hectare.

Much of the global production increase anticipated for 2016 is expected to be concentrated in *Asia*, where aggregate output is seen reaching 450.1 million tonnes. The 1.3 percent growth in the region's crop would be spearheaded by a 3 percent output recovery in **India** to 107.7 million tonnes. An overall normal pattern of the monsoon permitted main-crop plantings in India to rise 1.0 million hectares over year-earlier levels by mid-September and has boosted yield prospects and water availabilities for the successive irrigated Rabi crop. In **China (Mainland)**, producers have continued to favor rice over other crops due to the safety provided by sizeable state acquisitions at support prices. Although some flooding has occurred, the resulting area expansion should ensure that production in the country exceeds the 2015 record by 0.4 percent, reaching 143.2 million tonnes. Improved growing conditions should also give way to large absolute gains in the **Philippines** and **Thailand**, after crops in both countries were constrained by prolonged drought conditions last year. However, in the case of Thailand, production is forecast to stage a partial recovery to 20 million tonnes, given setbacks associated with short water supplies early in the season, coupled with sustained official efforts to encourage producers to shift to alternative crops. The **Islamic Republic of Iran,** the **Lao People's Democratic Republic**, **Myanmar** and **Nepal** are similarly likely to close the season with larger crops, while adverse weather undermined output in **Indonesia**, **Malaysia**, **Sri Lanka, Timor Leste** and **Viet Nam**. The anticipated output fall in **Bangladesh** is instead linked to a substitution of more profitable crops for rice, with planting cuts in **the Republic of Korea** also promoted by the state in order to reduce surplus output.

The production outlook for *Africa* remains positive, pointing to a 4 percent expansion from 2015 to 19.6 million tonnes. The anticipated growth mirrors

Figure 3. Global paddy production and area

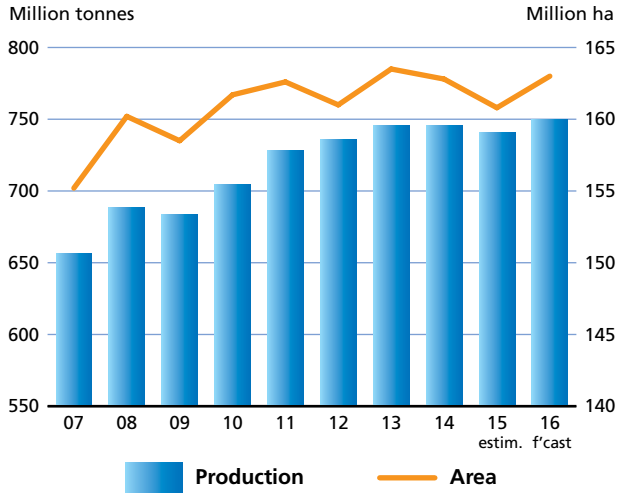


Figure 4. India production and area

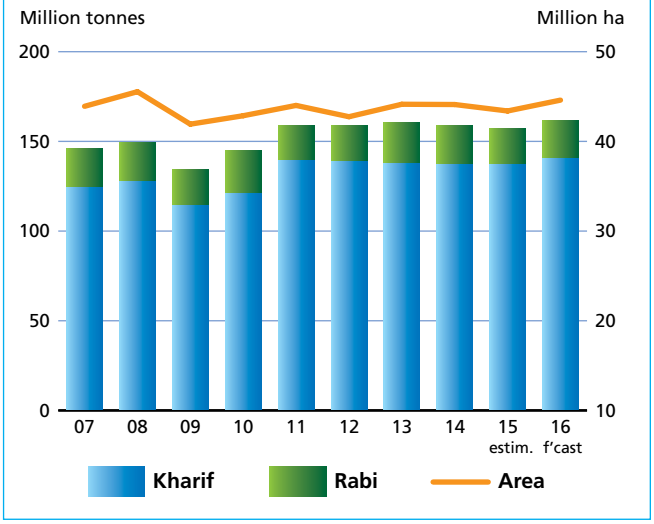


Table 1. World rice market at a glance

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
	million tonnes, milled equivalent			%
WORLD BALANCE				
Production	**494.6**	**491.5**	**497.8**	**1.3**
Trade [1]	**44.6**	**43.5**	**43.8**	**0.7**
Total utilization	**491.4**	**495.4**	**501.4**	**1.2**
Food	394.2	397.7	402.7	1.3
Ending stocks[2]	**174.7**	**170.7**	**169.6**	**-0.7**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/yr)	54.3	54.1	54.2	0.2
LIFDC (kg/yr)	59.0	58.7	58.7	0.0
World stock-to-use ratio (%)	*35.3*	*34.1*	*33.2*	
Major exporters stock-to-disappearance ratio[3] *(%)*	*24.2*	*19.3*	*17.3*	

FAO RICE PRICE INDEX (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Sep*	**Change: Jan-Sep 2016 over Jan-Sep 2015 %**
	235	211	196	-8.7

[1] Calendar year exports (second year shown).
[2] May not equal the difference between supply (defined as production plus carryover stocks) due to differences in individual country marketing years.
[3] Major exporters include India, Pakistan, Thailand, the United States and Viet Nam.

Table 2. Rice Production: leading producers *

	2014	2015 *estim.*	2016 *f.cast*	Change: 2016 over 2015
	million tonnes, milled equivalent			%
China (Mainland)	141.5	142.7	143.2	0.4
India	105.5	104.3	107.7	3.2
Indonesia	44.4	45.8	45.1	-1.5
Bangladesh	34.5	35.0	34.8	-0.4
Viet Nam	29.2	29.4	28.9	-1.6
Thailand	22.0	19.0	20.1	5.6
Myanmar	16.9	16.5	16.8	1.9
Philippines	12.4	11.4	12.2	7.0
Brazil	8.2	8.5	7.2	-14.8
Japan	7.8	7.6	7.7	1.1
United States	7.1	6.1	7.5	23.3
Pakistan	7.0	6.8	6.9	0.9
Cambodia	5.6	5.6	5.7	1.8
Korea Rep. of	4.2	4.3	4.2	-2.9
Egypt	4.3	4.1	4.3	6.8
World	**494.6**	**491.5**	**497.8**	**1.3**

* Countries listed according to their position in global production (average 2014-2016).

expectations of a 7 percent annual upturn in **Egypt** to 4.3 million tonnes, where attractive prices and a shift away from cotton cultivation have boosted rice plantings, but also of headway in West African countries such as **Chad**, **Mali**, **Nigeria** and **Senegal**. Indeed, despite some flooding problems, main crops through much of West Africa have benefitted from abundant rains this season, with the rice sector continuing to draw support under import substitution programmes. In Nigeria, for instance, officials have reaffirmed their commitment to attain self-sufficiency in rice by 2018 under the "Green Alternative" roadmap, with credit assistance to purchase basic inputs already channeled to producers under the Anchor Borrowers' Programme. Similarly, authorities in Senegal have renewed efforts to enhance the marketing of local crops, attaining commitments from importers to absorb almost 10 percent of the forecast output this year. Elsewhere in the continent, while generally conducive weather is expected to boost crops in the **United Republic of Tanzania**, El Niño-induced drought constrained output in **Malawi**, **Mozambique** and **Zambia**. Poor weather in southern regions similarly kept production in **Madagascar** at below average levels for a third successive season.

In *Latin America and the Caribbean*, where the bulk of crops has already been collected, 2016 production is expected to decline by 7 percent year-on-year to a six-year low of 17.7 million tonnes, as crops in numerous South American countries were beset by drought and/or flooding problems under the El Niño weather anomaly. These were compounded by cuts to area planted stemming from prospects of reduced margins, depressing output in **Argentina**, **Bolivia**, **Brazil**, **Guyana**, **Paraguay**, **Uruguay** and **Venezuela**. This contrasts with expectations of recoveries in **Cuba**, **Costa Rica, Mexico** and **Nicaragua,** and of record outturns in **Chile**, **Peru** and, especially, **Colombia**. In the latter, attractive prices fostered a surge in plantings, likely boosting output by 20 percent this season to a record of 1.7 million tonnes.

In *North America*, the USDA's latest assessment puts rice production in the **United States** at 7.5 million tonnes, 200 000 tonnes less than previously envisaged. The less buoyant outlook mirrors the impact of extensive flooding during August, especially in Louisiana and Arkansas, which hampered harvest operations, reduced yields and undermined the quality of crops that had still to be collected. However, these barely dented the outlook for a season that had been, otherwise, characterized by generally conducive weather and a strong rebound in plantings. As a result, the United States is set to harvest its second largest crop on record and 23 percent more than in 2015. In Europe, larger plantings and favourable yield outturns

in the **European Union** and the **Russian Federation** are foreseen to boost output in *Europe* to 2.6 million tonnes. Yet, the season proved far less auspicious in Oceania, where **Australia**'s production slumped to 167 000 tonnes, 64 percent below the already reduced 2015 outcome, as limited and costly water supplies for irrigation constrained plantings.

TRADE

Subdued demand from the Far East to stall trade recovery in 2017

Largely based on current expectations of 2016 crops, much of which will be consumed in the course of next year, FAO forecasts world trade in rice to amount to 43.8 million tonnes in 2017. This is marginally (300 000 tonnes) above the 2016 depressed figure, marking the third successive year of declining or stagnating trade growth. Underlying the downcast outlook are prospects of continued subdued demand in Asia, especially in the Far East, where improved local harvests may enable traditional importers such as **Indonesia** and the **Philippines** to cut imports, while rather ample inventories may keep **Bangladesh** and **Sri Lanka**'s purchases at reduced levels. In the case of **China (Mainland)**, the largest single global destination of rice, 2017 purchases are put at 6.3 million tonnes, unchanged from 2016 expectations. Although the wide gaps between Chinese quotations and those of near-by suppliers should continue to keep Chinese imports large, prospects of deliveries to country gaining further ground next year are tempered by ongoing government efforts to slow the influx of rice through borders with Viet Nam and Myanmar.

Import demand is anticipated to be firmer in the Near East, under expectations that countries such as **Iraq**, **Saudi Arabia**, **Turkey** and the **United Arab Emirates** will need to replenish stockpiles drawn thin in the course of 2016. Purchases by the **Islamic Republic of Iran** are also forecast to edge up to 1.1 million tonnes next year, while remaining below their 2012 and 2014 levels, due to a good crop and the intermittent imposition of import restrictions.

Deliveries to *African* countries are seen in the order of 14.2 million tonnes in 2017, up 4 percent from the 2016 depressed level, but below the heights registered in 2014. Indeed, many of the factors that have tended to curtail deliveries to the region over the past two years, namely good local harvests and weak local currencies, are expected to continue into 2017. This is even if more attractive international offerings could provide some scope for countries to meet their fast-expanding domestic needs by stepping-up imports. Within the region, **Burkina Faso**,

Figure 5. Rice imports by region

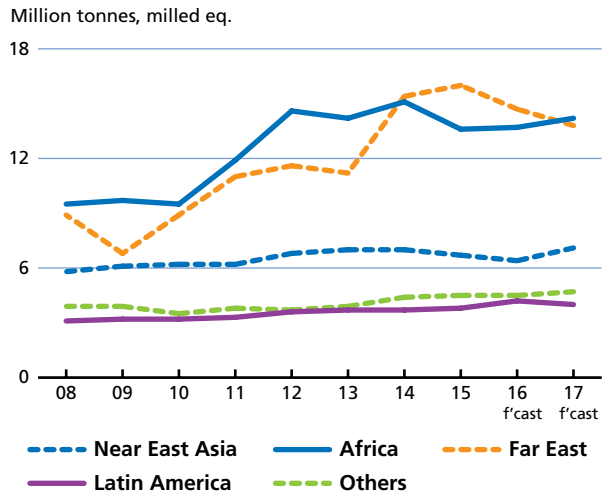


Figure 6. Rice exports by the major exporters

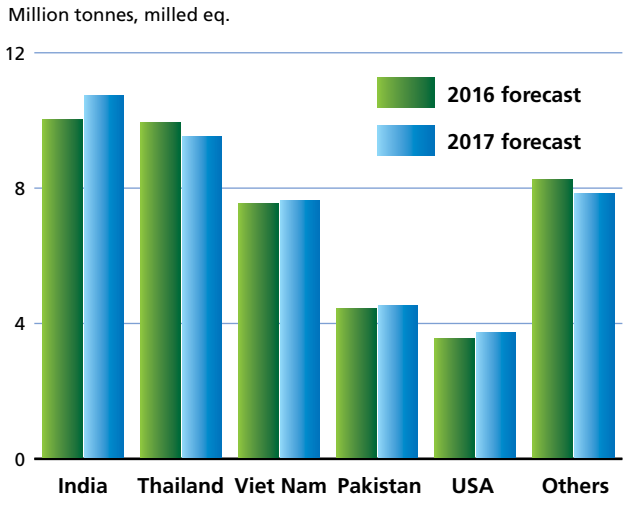
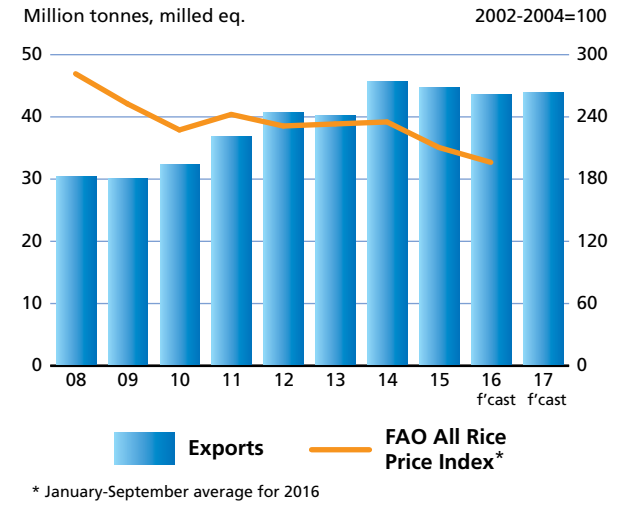


Figure 7. World rice trade and FAO all rice price index



Cameroon, **Mauritania**, **Niger** and **South Africa** could all purchase more rice, with year-on-year growth in **Ghana** also facilitated by the recent rescinding of a three-year old ban on overland deliveries. By contrast, good seasonal turnouts are expected to permit **Senegal** and **Cote d'Ivoire** to reduce imports by 4 percent each, arriving at 1.1 and 1.3 million tonnes, respectively. On the other hand, purchases by **Nigeria** may remain limited, at around 2.5 million tonnes, should the prevailing weakness of the Naira persist along with current restrictions that prevent rice traders' access to official currency markets.

After reaching an all-time high in 2016, aggregate deliveries to *Latin America and the Caribbean* in 2017 are expected to subside by 6 percent year-on-year to 4.0 million tonnes. Within the region, output recoveries may lead **Cuba** and **Brazil** to cut imports, with easing inflationary pressure following an excellent harvest also enabling **Colombia** to reduce purchases relative to the record of 300 000 tonnes forecast for 2016. Elsewhere, strong domestic demand for Indica and fragrant varieties could extend the upward streak in imports by the **European Union** for another year, with deliveries to the **United States** also expected to rise by 1 percent to 775 000 tonnes.

On the export side, anticipation of international demand remaining tepid for a third successive year raises prospects of competition for markets intensifying in 2017. At country level, improved availabilities from a good harvest in **India** are forecast to raise the country's shipments by 7 percent to 10.7 million tonnes, thus consolidating its position as the world's leading supplier of rice for the sixth straight year. The resurgence of Indian exports would mainly come to the detriment of **Thailand**, which could see its 2017 shipments contract by 4 percent to 9.5 million tonnes. The reduction comes amid expectations of only a partial output recovery in the country, although official efforts to dispose of the 8.4 million tonnes of rice still held in Thai public granaries by next year could cushion the country's export fall. Prospects are similarly subdued for **Viet Nam**, which, in the absence of a major boost to fragrant and glutinous sales, may see faltering demand for white rice from traditional Asian outlets keep its shipments close to the six-year low expected for 2016, at 7.6 million tonnes. Among other exporters, lower export quotations due to a bumper crop are anticipated to raise shipments by **United States** by 6 percent year-on-year to a seven-year high of 3.7 million tonnes. **Australia**, **Cambodia** and **Pakistan** could similarly count on sufficient availabilities to step up shipments in 2017, while consignments are expected to decline for **Argentina**, **Brazil**, **Uruguay** and **Paraguay**. In the case of **Egypt,** an anticipated contraction is linked to the continuance of the ban on milled rice exports and the recent inclusion of broken shipments in the ban.

UTILIZATION

Per capita food intake to rise slightly in 2016/17

Total rice utilization is forecast to reach 501.4 million tonnes in 2016/17, up 1.2 percent year-on-year. The expansion is anticipated to be sustained by a 1.3 percent increase in world food use to 402.7 million tonnes, accounting for 80 percent of total projected use. Volumes destined to animal feed are also seen edging up to 18.3 million tonnes, amid expectations that Japan, the Republic of Korea and Thailand would continue encouraging rice use in the livestock sector to dispose of surplus produce. Other uses (including seeds, post-harvest losses and non-food industrial uses) are expected to absorb 80.4 million tonnes over the year. Based on these tendencies, world food use would stage a modest recovery on a per capita basis, rising from 54.1 kg in 2015/16 to 54.2 kg per person this season. This would reflect expectations of a 0.1 kg gain in Asia to some 78.4 kg and in Africa to 24.9 kg per person. Nonetheless, much will still depend on domestic quotations. During the third quarter of 2016, retail and wholesale rice prices remained above their year-earlier levels in various Asian countries, mirroring production shortfalls incurred in 2015/16 due to unfavourable weather. Larger price gains have been registered in southern Africa and South America, amid a combination of weak local currencies and output shortfalls.

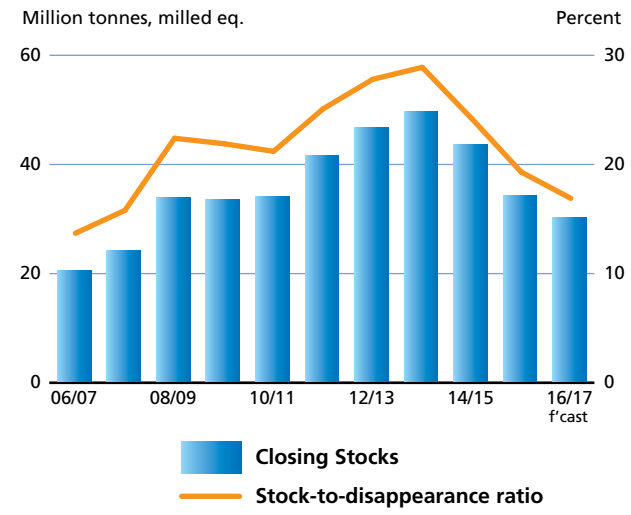
STOCKS

Despite sustained reductions in the major exporters, world rice stocks in 2016/17 sufficient to cover four months of global domestic use

In line with the improved production outlook, forecasts of world rice inventories at the close of 2016/17 have been raised to 169.6 million tonnes. This level would stand 0.7 percent, or 1.1 million tonnes, short of the 2015/16 estimate, while still suggesting a comfortable level of global supplies, with world reserves sufficient to cover 4 months of projected global use. This would keep the world stocks-to-use ratio in 2016/17 at 33.2 percent, over the 30 percent mark it has consistently exceeded over the past five years.

From a regional perspective, much of the forecast stock reduction is expected to take place in *Asia*, with

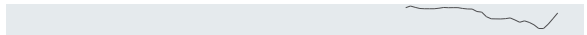
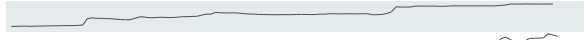
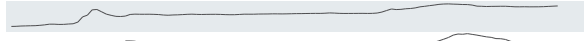
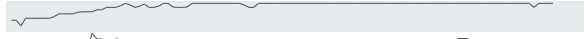
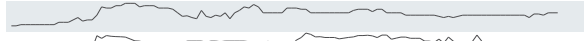
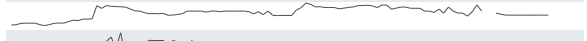
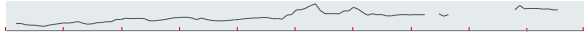
Figure 8. Stocks held by the five major rice exporters and stock-to-disappearance ratio



India and **Thailand** once again driving the fall by cutting reserves to 16.5 and 8.2 million tonnes, respectively. In both cases, drawdowns come amid expectations of sustained government efforts to trim the size of their reserves. Although reductions are also expected to concern a few rice importers within the region, such as **Bangladesh**, **Indonesia**, **Sri Lanka** and **Saudi Arabia**, in most cases declines would occur from hefty reserves amassed the previous year through good harvests or large imports. Moreover, cuts would be more than outweighed by accumulations in other countries, especially in **China (Mainland)**. Reflecting a combination of steady output gains and sizeable imports, 2016/17 carry-overs in China are predicted to expand by 4 percent year-on-year to a high of 101.5 million tonnes. Improved harvests may similarly enable **Cambodia**, **Nepal** and the **Philippines** to replenish their reserves. On the other hand, gains in the **Republic of Korea** are linked to long-term dietary shifts away from rice consumption and in **Viet Nam** to a poor export performance. *Elsewhere*, poor harvest results are envisaged to entail carry-over cuts in **Argentina**, **Australia** and **Madagascar**. However, the steepest fall is forecast to take place in **Brazil**, where a poor harvest and still sizeable exports are expected to reduce the country's reserves by as much as 67 percent, year-on-year, to a low of 215 000 tonnes. By contrast, **Colombia**, the **European Union** and the **United States** are all expected to accumulate more rice, with the United States closing the season with 1.9 million tonnes in stock, the highest volume in over three decades.

Seen from a trade angle, the predicted drawdown in Indian and Thai inventories would lower aggregate reserves of the major rice exporters – India, Pakistan, Thailand, the United States and Viet Nam – by 11 percent year-on-year to 30.4 million tonnes in 2016/17. This would result in the group's stock-to-disappearance ratio falling from an estimated 19.3 percent.

Table 3. Monthly retail prices of rice in selected markets

	Historical monthly price trend	Latest available: Month	USD/Kg	Latest quotation available compared to: /1 3 months earlier	1 year earlier	2 years earlier
ASIA	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Bangladesh: Dhaka (coarse)		Aug-16	0.43	27%	9%	-7%
Cambodia: Phnom Penh (mix)*		Aug-16	0.41	3%	6%	6%
China: 50 City Avg. (japonica second quality)		Aug-16	0.94	0%	2%	5%
India: Delhi		Aug-16	0.47	13%	4%	6%
Indonesia: Ntl. Avg. (medium quality)		Aug-16	0.80	0%	4%	17%
Japan: Ku-area of Tokyo (non-glutinous)		Jun-16	4.45	1%	5%	-5%
Republic of Korea: Ntl. Avg.		Sep-16	1.76	0%	-12%	-12%
Lao PDR: Vientiane (glutinous first quality)		Jul-16	1.02	0%	7%	7%
Mongolia: Ulaanbaatar		Jul-16	1.21	0%	6%	8%
Myanmar: Yangon (Emata, Manawthukha FQ)*		Aug-16	0.44	4%	6%	36%
Occupied Palestinian Territory: West Bank (short grain)		Aug-16	1.95	1%	0%	7%
Pakistan: Karachi (irri)		Aug-16	0.41	1%	-2%	-29%
Philippines: Ntl. Avg. (well-milled)		Aug-16	0.89	2%	1%	-4%
Saudi Arabia: Ntl. Avg. (Basmati, White Indian)		Jul-16	2.16	-1%	-10%	-9%
Sri Lanka: Colombo (white)		Aug-16	0.47	0%	7%	-4%
Thailand: Bangkok (5% broken)*		Aug-16	0.38	-4%	10%	3%
Viet Nam: Dong Thap (25% broken)*		Aug-16	0.32	-2%	6%	-12%
WESTERN AFRICA						
	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Benin: Cotonou (imported)		Jul-16	0.89	0%	0%	0%
Burkina Faso: Ouagadougou (imported)*		Aug-16	0.59	0%	0%	6%
Chad: N'Djamena (imported)		Jul-16	0.82	-4%	-2%	-2%
Mali: Bamako*		Aug-16	0.63	6%	-5%	6%
Niger: Niamey (imported)*		Aug-16	0.68	5%	5%	11%
Senegal: Dakar (imported)		Jun-16	0.59	0%	-	-9%
Togo: Lomé (imported)		Aug-16	0.67	-8%	-4%	-27%
EASTERN AFRICA						
	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Somalia: Mogadishu (imported)		Aug-16	0.48	-4%	-4%	-12%
Uganda: Kampala*		Aug-16	0.81	-16%	-3%	0%
United Rep. of Tanzania: Dar es Salaam*		Aug-16	0.86	-3%	-	38%

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

** Wholesale prices.*

Sources: FAO/GIEWS GIEWS Food Price Data and Analysis Tool; Korea Agricultural Marketing Information Service (KAMIS); Japan Ministry of Agriculture, Forestry and Fisheries; U.S. Bureau of Labor Statistics (BLS); Associazione Industrie Risiere Italiane (AIRI).

Please note that prices shown are comparable over time, but not across countries, as they may refer to different stages of the marketing chain (e.g. retail versus wholesale prices), different rice types (e.g. aromatic versus non-aromatic) or different qualities of rice (e.g fully broken versus 5% brokens).

Table 3. Monthly retail prices of rice in selected markets (Cont'd)

	Historical monthly price trend	Latest available: Month	USD/Kg	Latest quotation available compared to: /1 3 months earlier	1 year earlier	2 years earlier
SOUTHERN AFRICA	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Angola: Luanda		Jul-16	3.71	26%	81%	90%
Madagascar: Ntl. Avg. (local)		Aug-16	0.48	-	-	24%
Malawi: Lilongwe		Jul-16	1.04	0%	65%	81%
Namibia: Windhoek		Aug-16	1.31	-1%	15%	21%
Swaziland: Ntl. Avg.		Jul-16	0.71	-18%	4%	4%
Zimbabwe: Harare		Jul-16	1.17	-1%	-16%	-16%
CENTRAL AMERICA AND THE CARIBBEAN						
	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Costa Rica: Ntl. Avg. (first quality)		Aug-16	1.34	0%	-1%	-4%
Dominican Rep: Santo Domingo (first quality)		Sep-16	1.02	1%	3%	4%
El Salvador: San Salvador		Aug-16	0.97	0%	-5%	-16%
Guatemala: Guatemala City (second quality)*		Sep-16	0.74	0%	-4%	-16%
Haiti: Port-au-Prince (imported)		Sep-16	0.73	0%	3%	4%
Honduras: San Pedro Sula (second quality)*		Sep-16	0.73	-1%	-1%	-7%
Mexico: Mexico City (sinaloa)*		Sep-16	0.70	4%	3%	15%
Nicaragua: Managua (oriental) (first quality)*		Sep-16	0.93	0%	2%	3%
Panama: Panama City (first quality)*		Sep-16	0.87	0%	-1%	3%
SOUTH AMERICA						
	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Bolivia: La Paz (grano de oro)*		Aug-16	0.99	7%	7%	-17%
Brazil: São Paulo		Jul-16	0.99	8%	24%	31%
Colombia: Ntl. Avg (first quality)		Aug-16	1.12	-2%	9%	35%
Ecuador: Quito (long grain)*		Aug-16	1.27	2%	9%	15%
Paraguay: Asunción*		Aug-16	0.72	0%	14%	7%
Peru: Lima (corriente) *		Aug-16	0.62	2%	2%	2%
Uruguay: Ntl. Avg. (grade 1)*		Aug-16	1.07	0%	20%	24%
NORTH AMERICA						
	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
United States: City Avg. (long grain, uncooked)		Jul-16	1.63	5%	10%	-2%
EUROPE						
	2007 2008 2009 2010 2011 2012 2013 2014 2015 2016			-100 0 100	-100 0 100	-100 0 100
Italy: Milan (arborio volano)*		Sep-16	1.59	-8%	-16%	12%

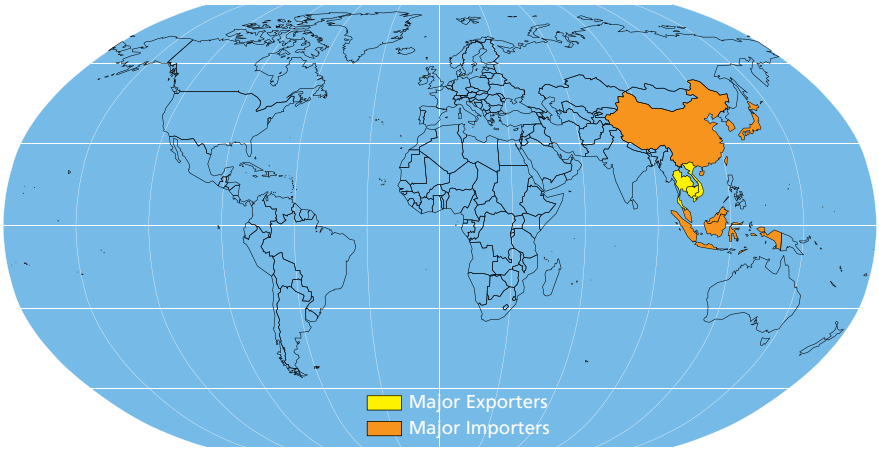
/1 *Quotations in the month specified in the third column were compared to their levels in the preceding three, twelve and twenty-four months. Price comparisons were made in nominal local currency units.*

** Wholesale prices.*

Sources: FAO/GIEWS GIEWS Food Price Data and Analysis Tool; Korea Agricultural Marketing Information Service (KAMIS); Japan Ministry of Agriculture, Forestry and Fisheries; U.S. Bureau of Labor Statistics (BLS); Associazione Industrie Risiere Italiane (AIRI). Please note that prices shown are comparable over time, but not across countries, as they may refer to different stages of the marketing chain (e.g. retail versus wholesale prices), different rice types (e.g. aromatic versus non-aromatic) or different qualities of rice (e.g fully broken versus 5% brokens).

CASSAVA

Major Cassava Exporters and Importers



PRICES

International quotations of cassava in sharp decline

Monthly reference prices of internationally traded cassava, a market that is mostly confined to East and Southeast Asia, have fallen markedly in the past 12 months, despite a rally in the second quarter of 2016. In September 2016, Thai chips (f.o.b. Bangkok) were being quoted at an average USD 180 per tonne, around 20 percent lower than in the corresponding month of last year, with Thai flour and starch quotations (Super High Grade, f.o.b. Bangkok) losing over 25 percent of their value – or around USD 100 – over this period, dropping to an average USD 325 per tonne in September 2016. Thai domestic root prices, the raw material that underpins these quotations, have undergone even more profound falls, losing more than a third of their value over the past 12 months.

The decline of world import demand, which was exacerbated in recent months by policy changes in China – the major destination for internationally traded cassava products – has largely triggered the plummeting of quotations. In June of this year, China began to implement measures to lower its accumulated stockpiles of maize, with the state grain reserves body auctioning 2 million tonnes of the commodity, deemed unfit for human consumption, to its feed and industrial sectors. As imported cassava competes directly with maize in these sectors, China's stock release had a dramatic effect on world cassava quotations, especially given the thinness of the international market for cassava. The removal of minimum support prices for maize in China has also made domestic maize more competitive with imported substitutes, further pressurizing cassava quotations.

Table 1. World cassava market at a glance

	2014	2015 *estim.*	2016 *f'cast*	Change: 2016
	million tonnes, fresh root eq.			%
WORLD BALANCE				
Production	**278.7**	**281.1**	**288.4**	**2.6**
Trade	**37.2**	**39.3**	**28.2**	**-28.4**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	20.7	20.7	21.0	1.5
Developing (kg/year)	34.11	33.88	34.26	1.1
LDC (kg/year)	70.5	66.1	67.1	1.5
Sub-Saharan Africa (kg/year)	114.4	109.2	108.8	-0.4
Trade share of prod. (%)	13.3	14.0	9.8	-30.2
CASSAVA PRICES [1] (USD/tonne)	**2014**	**2015**	**2016 *Jan-Sep***	**Change: Jan-Sep 2016 over Jan-Sep 2015**
Chips to China (f.o.b. Bangkok)	228.1	215.7	178.3	-17.3
Starch (f.o.b. Bangkok)	428.8	430.5	361.0	-16.2
Thai domestic root prices	72.4	70.0	51.3	-26.7

[1] Source: Thai Tapioca Trade Association

Figure 1. International cassava prices (Oct 2013 - Sept 2016)

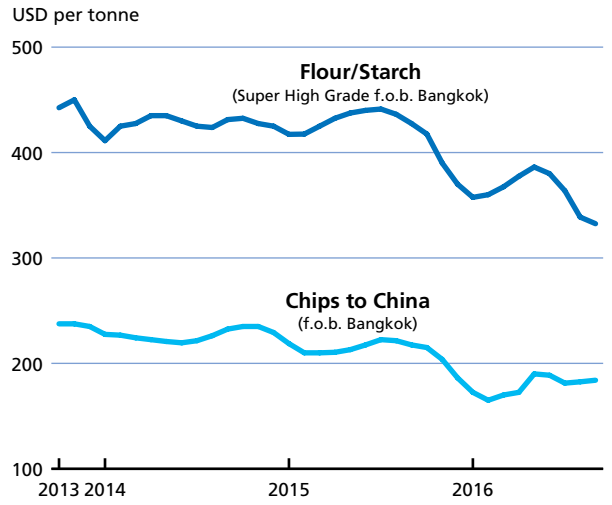


Figure 2. Maize and cassava chip prices (Oct 2013 - Sept 2016)

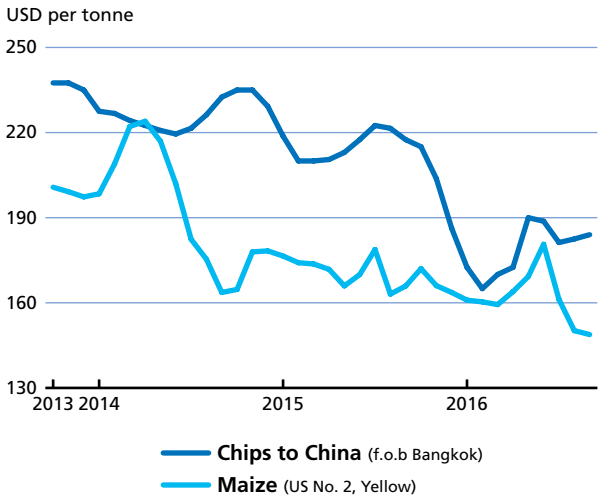


Figure 3. Thai root producer prices (Oct 2013 - Sept 2016)

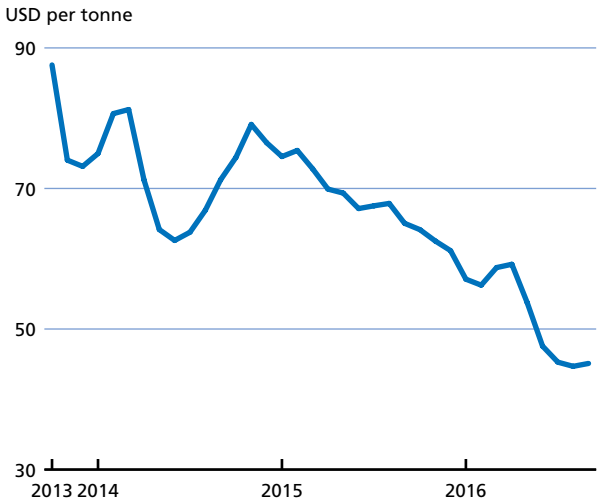


Table 2. World cassava production

	2013	2014*	2015**	2016**
	(000 tonnes)			
World	**263 177**	**278 667**	**281 050**	**288 427**
Africa	**144 180**	**156 384**	**153 451**	**157 056**
Nigeria	47 407	54 832	57 000	57 855
Congo, Democratic Rep. of	16 500	16 817	15 300	15 200
Ghana	15 990	16 524	17 213	17 957
Angola	16 412	7 639	7 727	7 788
Mozambique	4 303	12 700	8 103	9 100
Tanzania, United Republic of	4 755	5 923	5 500	5 610
Uganda	2 979	2 812	2 587	2 400
Malawi	4 814	5 143	5 000	5 000
Benin	3 910	4 067	3 421	3 738
Cameroon	4 596	4 836	5 000	5 170
Rwanda	2 948	3 117	3 000	3 060
Madagascar	3 115	3 033	2 750	3 000
Côte d'Ivoire	2 436	4 239	5 087	5 189
Other Africa	*14 015*	*14 703*	*15 764*	*15 989*
Latin America	**30 538**	**32 698**	**31 914**	**31 576**
Brazil	21 484	23 242	22 784	22 410
Paraguay	2 800	3 000	3 000	3 114
Colombia	2 491	2 635	2 510	2 540
Other Latin America	*3 763*	*3 821*	*3 620*	*3 512*
Asia	**88 276**	**89 379**	**95 469**	**99 579**
Thailand	30 228	30 022	32 358	31 807
Indonesia	23 937	23 436	22 906	26 749
Viet Nam	9 758	10 210	10 674	10 201
India	7 237	8 139	8 000	7 840
China, mainland	4 585	4 593	4 500	4 548
Cambodia	8 000	7 933	11 944	13 222
Philippines	2 362	2 540	2 714	2 858
Other Asia	*2 171*	*2 504*	*2 373*	*2 354*
Oceania	**261**	**283**	**292**	**292**

* Estimate
** Forecast

PRODUCTION

Global cassava production to rise in 2016

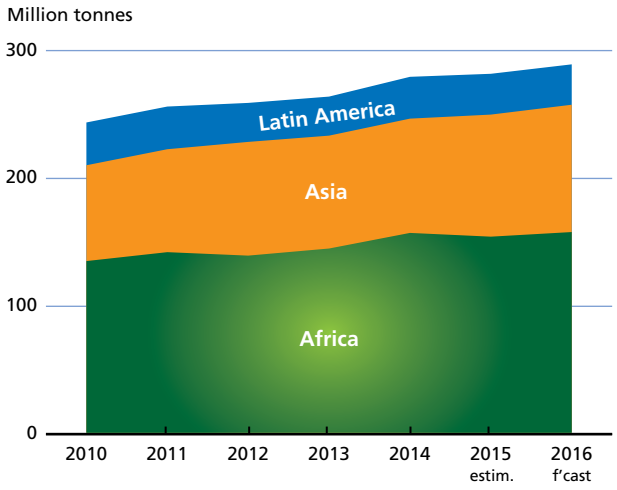
World cassava production is tentatively forecast to reach 288 million tonnes in 2016, 3 percent, or over 8 million tonnes, more than last year, restoring cassava's status as one of the world fastest expanding staple crops. The anticipated output recovery rests on a return to more normal weather conditions compared with last year, when El Niño marred yields in most growing regions. In fact, the crop's tolerance to erratic weather conditions spared cassava from further substantial output reductions in 2015.

Forecasting cassava production is difficult, due to a widespread lack of data on harvest expectations and negligible information on planting intentions. Even in countries where the crop is known to play a critical role in food security and rural development, or where its trade carries importance, little effort is made to regularly survey the crop, as is done for other staple crops. This holds especially true in *sub-Saharan Africa* (SSA), the world's largest cassava growing region. Nevertheless, with rising demand for the staple and with food security and the rural economy high on the policy agendas of the region, 2016 cassava production in SSA could rebound to a record 157 million tonnes after having undergone an estimated 2 percent contraction last year.

The crop is the object of many expansion programmes in the region, as commercialization of cassava remains a key objective of many West African governments. **Nigeria**, the regional production and world leader, is projected to harvest around 58 million tonnes, almost 1 million tonnes more than in 2015. Under its 2016–2020 Agriculture Promotion Policy, the country will continue to provide preferential loans to producers and grants to processors for the expanded uptake of domestic cassava and to sustain the continued propagation of improved varieties. Nigeria also encourages the processing of cassava into flour as a substitute for wheat in bread, which would enable the country to limit its high dependency on imported wheat. Indeed, with consumer purchasing power being negatively affected by high inflation and a falling currency, many have turned to cassava as a more affordable staple than imported rice, providing a further stimulus to national cassava output in 2016.

Supported by favourable growing conditions and a conducive policy environment, cassava production in **Ghana**, the region's second largest cassava producer, could rise by 4 percent to a record 18 million tonnes in 2016. Current year prospects also remain positive in other important producing countries in West Africa, especially **Côte d'Ivoire**, **Cameroon**, **Benin**, **Sierra Leone** and **Benin**, where either all-time high or exceptional harvests are anticipated.

Figure 4. World production of cassava



In *central, eastern and southern African* countries, cassava production is expected to recover from the drought-afflicted levels of 2015. Cassava's tolerance to erratic weather conditions spared output in these subregions from considerable disruption last year and has even put cassava expansion high on the agendas of many governments. Positive cassava outcomes are anticipated in **Angola**, **Madagascar**, **Mozambique**, **United Republic of Tanzania** and **Rwanda**. By contrast, conflict and floods reported in the **Democratic People's Republic of Congo** are likely to have curtailed production in 2016.

In *Asia*, the regional 2016 cassava production is forecast to increase by around 4 percent to a record 100 million tonnes. The industrial utilization of cassava in the alcohol, ethanol, starch and animal feed sectors, and their lucrative export markets, have underpinned a sustained expansion of the crop in the region, particularly in Southeast Asia. However, weather disruptions, including dryness from El Niño, have affected cassava yields and stymied the prospect of a much larger 2016 regional harvest.

In **Thailand**, Asia's largest producer, the 2016 season has concluded, and official reports point to a small decline in production from the record crop of last year. Despite higher cassava plantings, a drought-induced drop in yields is behind the 2 percent fall in 2016 output. In **China**, crop production is forecast to remain at around last year's level. The country largely sources its cassava needs in processed form (mainly dry chips and flour) from Thailand and neighbouring countries, namely Cambodia, Lao People's Democratic Republic and Viet Nam, where

it has engaged in efforts to ensure long-term supplies. Of all these countries, only **Cambodia**'s production is expected to increase in 2016. The country is anticipated to gather a record crop of some 13 million tonnes, over 1 million tonnes more than in 2015. Buoyed by rising regional demand in recent years, the expansion of cassava cultivation in Cambodia has been remarkable, increasing three-fold in the space of six years.

In contrast, in **Indonesia** and the **Philippines,** cassava is more important for food security than for industry. Dietary diversification programmes in the two countries have targeted cassava as a substitute for rice. Record cassava harvests are foreseen in both countries in 2016, boosted by higher plantings and above average yields. In Indonesia, 27 million tonnes could be gathered, some 17 percent more than last year, while in the Philippines, output is expected to reach 2.9 million tonnes, some 5 percent more than in 2015.

In *South Asia*, cassava plays a role in food security in **India**, particularly in the major growing states of Kerala (consumption of fresh roots) and Tamil Naidu (starch for food manufacturing). Combined, the two states account for 98 percent of national output. Production by the country in 2016 is expected to fall by 2 percent from last year, to 7.8 million tonnes. Cassava output is on a gradual decline in India, as farmers are opting to cultivate more remunerative crops, such as rubber, black pepper and coffee.

The cassava production outlook for *Latin America and the Caribbean* points to a successive year of contraction in 2016. In **Brazil**, the region's leading producer, and also in **Paraguay**, low prices at the beginning of the season resulted in a decline of plantings, bringing about a slight decrease in cassava output in both countries. Concerning the region's other sizable producing countries, production is expected to remain stable in **Colombia** and **Peru**.

UTILIZATION

Rising demand for processed cassava

Cassava is utilized in a multitude of ways. Food constitutes the major end use of the crop, but local and regional markets for animal feed, industrial use and energy feature prominently. Assessing the levels of uptake by different markets is virtually impossible, as again, little concerted effort is made at the country level to assess utilization. On the other hand, because cassava roots are highly perishable once harvested, they are almost utilized entirely within the crop year, making market assessments somewhat easier.

Cassava is mainly utilized as a **foodstuff**. As a staple, the root crop has little importance in the global diet (typically 21 kg per capita per year in fresh root equivalent) owing to its perishability and bulkiness which preclude its widespread trade. However, cassava has major dietary significance in areas where it is grown. This is particularly evident in sub-Saharan Africa, where cassava is an important dietary staple in root form, but also in processed form. Indeed, fermented and non-fermented granulated and flour-based cassava products are increasingly popular in the region. Many countries in sub-Saharan Africa have launched value addition initiatives in the cassava food chain, promoting cassava to support the rural economy and help meet rising dietary needs. Since non-food markets for cassava are of little significance in sub-Saharan Africa, production levels effectively translate into levels of food availability in the region. As a result, the per capita food availability is estimated at approximately 109 kg in fresh root equivalent in 2016, which is marginally down from last year. This comes in spite of a sizeable increase in production, as population growth has outpaced that of output, resulting in the fall in per capita availability in 2016.

Cassava also features prominently in diets in Latin America and the Caribbean, especially in Brazil, where the blending of cassava flour with wheat flour is mandatory. Likewise, in south Asia (India) and Southeast Asia (Indonesia and Philippines) cassava is widely consumed as food. However, as non-food markets for cassava are also well established in these regions, it is difficult to assess precise changes in its direct human consumption.

Demand for cassava as a raw material in the **energy** sector, particularly in East and Southeast Asia, has stalled. Low gasoline prices have generally put ethanol at a competitive disadvantage and, where mandatory blending rates are in force, competition among agricultural feedstocks for energy conversion is fierce. For instance, in China, the rising availability of lower priced maize has substantially lowered the uptake of cassava by the energy sector. In Viet Nam, relatively high cassava root prices have resulted in the closure of two of the country's three cassava-based biofuel plants, despite the presence of a national mandate requiring blending rates of 5 percent. On the other hand, in Thailand, shortfalls in the availability of molasses derived from sugarcane could lead to expanded use of cassava in ethanol production.

Based on analysis in countries that have established markets for cassava feedstuffs, the use of cassava globally as an animal **feed** could also fall in 2016, where it is in direct competition with other feeding stuffs, particularly maize, and where annual supplies of cassava are expected to fall, such as in Brazil. Thailand could again be an exception to this trend, as the slump in international demand for its cassava products may foster a diversion of supplies to its domestic feed sector.

TRADE

Sharp contraction in cassava product trade in 2016

The volume of world trade in cassava is expected to fall to 14 million tonnes (chip and pellet weight equivalent), some 5.5 million tonnes, or 28 percent, below last year's volume, reaching a six-year low.

Mostly confined to East and Southeast Asia, international flows of cassava are hugely contingent on industrial and feed demand for the product, particularly from China, and on the competitiveness of Thai exports. The importance of the two countries in shaping international trade is noteworthy, with China typically accounting for over 70 percent of world imports, and Thailand for around 80 percent of world exports. With policy change in China supporting the increased use of domestic substitutes, principally maize, international demand for cassava products has plummeted. Based on the annual pace of shipments to date, Thai exports of chips, virtually all of which are procured by China, are expected to decline by 40 percent to 4.4 million tonnes, while Thai deliveries of cassava starch could fall by around 17 percent to 6.3 million tonnes. The sharp drop in Thai exports, which could be well over 4 million tonnes (chip and pellet weight equivalent), is mostly due to China directing its maize surpluses towards ethanol distilleries and animal feeding, thereby negating demand for the cassava-based products. Thai exporters have expressed an unwillingness to reduce their asking prices at the expense of stalling trade.

Exports of cassava products from Viet Nam – the other important supplier in the region – are also expected to fare negatively in 2016, with shipments that mostly comprise chips destined for China foreseen down by 20 percent from last year. Similarly, Cambodia could see cassava deliveries down this year. Again, export quotations from these sources remain stubbornly high despite faltering regional demand.

As for buyers other than China, purchases are mostly for cassava starch of Thai origin with very little international demand for chips and pellets. Concerning starch trade flows, smaller import volumes are anticipated by Indonesia and Malaysia in 2016, while Japan is expected to purchase a record volume of over 1 million tonnes of the product, some 26 percent more than in 2015.

Prospects for an international cassava market expanding beyond Asia remain largely elusive, with no sign of re-emerging demand for substantial cassava volumes in Europe, or of significant exports from the major producing regions of Africa or Latin America and the Caribbean.

Table 3. World exports of cassava (Product weight of chips and pellets)

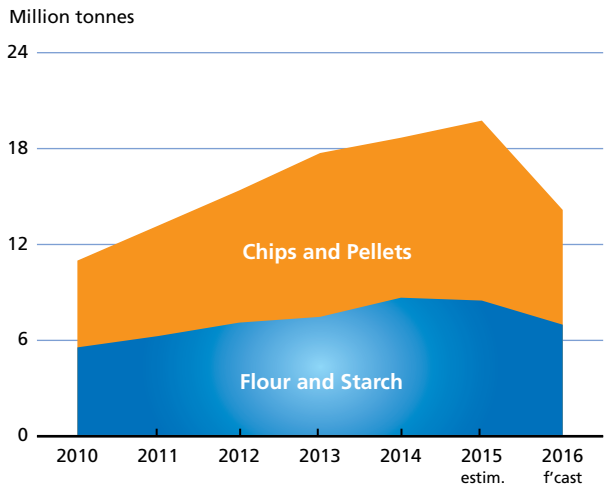
	2012	2013	2014	2015	2016
	000 tonnes				
Total	**15 303**	**17 638**	**18 600**	**19 664**	**14 082**
Flour and Starch	**7 029**	**7 391**	**8 588**	**8 405**	**6 900**
Thailand	6 163	6 686	7 919	7 657	6 330
Viet Nam	500	355	337	432	320
Others	*367*	*350*	*333*	*316*	*250*
Chips and Pellets	**8 273**	**10 247**	**10 012**	**11 259**	**7 182**
Thailand	4 853	6 006	6 927	7 458	4 402
Viet Nam	2 386	2 700	2 565	3 081	2 280
Cambodia	722	361	350	420	300
Nigeria			20	150	100
Others	200	180	150	150	100

Table 4. Thai trade in cassava (Product weight of chips and pellets)

	2012	2013	2014	2015	2016
	000 tonnes				
Total	**11.016**	**12.692**	**14.845**	**15.115**	**10.732**
Flour and Starch					
Total	**6.163**	**6.686**	**7.919**	**7.657**	**6.330**
Japan	843	872	916	851	1.074
China	1.577	2.774	3.513	3.052	2.159
Chinese Provence of Taiwan	555	628	665	610	609
Indonesia	1.482	647	888	1.256	726
Malaysia	575	436	525	586	353
Others	1.131	1.329	1.412	1.302	1.410
Chips and Pellets					
Total	**4.853**	**6.006**	**6.927**	**7.458**	**4.402**
China	4.772	5.930	6.918	7.431	4.383
Others	174	77	9	27	53

Source: Thai Tapioca Trade Association (TTTA), FAO

Figure 5. World trade in cassava products (chip and pellet equivalent)



OUTLOOK

Cassava at the cross roads?

Growth prospects for world cassava sectors appear delimited along the lines of geography that characterize the role of cassava in the agricultural economy. For instance, as cassava is principally a food crop in Africa, the sector is providing a strong stimulus for rural development, poverty alleviation, economic growth and, ultimately, food security. There is also wider recognition of cassava as a choice crop in the context of climate change adaptation strategies, particularly in eastern and southern African countries that have recently endured long periods of drought. These considerations are providing cassava sectors in the continent with a more assured long-term footing and are, by and large, behind an annual average production growth rate that has outpaced population growth for the past decade.

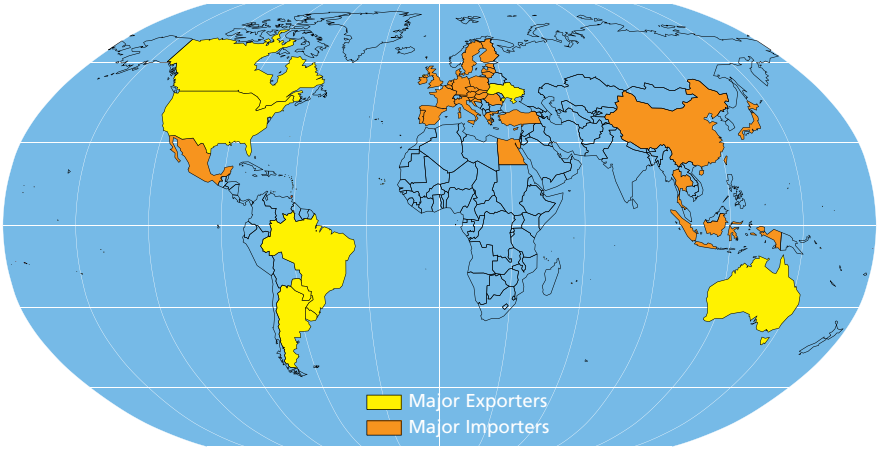
By contrast, cassava sectors in Asia are strongly susceptible to developments in China, the principal destination for cassava products. In fact, almost all cassava sectors in Southeast Asia have been geared to meet China's high import demand, expanding in tandem with regional trade growth. However, with highly competitive industrial and feed procurement, China has demonstrated in the past few months its willingness to turn to other substitutes. Helped by a policy shift, China's industrial and feed sectors began using maize released from the nation's accumulated stockpiles, instead of imported cassava. The move is expected to result in a substantial cut in overall cassava shipments to China in 2016, and will likely do so again in 2017 with the prospect of more maize being released from its inventories. Given the thinness of international cassava trade, even small releases from China's maize stocks can bring about serious ramifications to the international market for cassava, as witnessed in June of this year.

The potential for cassava to compete in markets beyond China is also uncertain, given that international maize prices have fallen to multi-year lows. Consequently, cassava product quotations are being considerably pressured, and the likelihood of a further significant price correction must gather momentum if cassava sectors are to remain commercially viable and if they are to compete in the international marketplace.

Already in Thailand, the world's leading supplier, where international export quotations are by and large determined, the price gap between cassava roots and cassava products has widened exceptionally, with prices of the raw material falling to a seven-year low. With China's maize inventories overhanging the entire regional market for cassava, the Government of Thailand recently announced the release of some 350 000 tonnes of processed cassava from official stocks, a move which ought to lessen, in part, the strength of cassava product prices. But with such low root prices prevailing at the onset of the new season, cassava plantings are likely to be impacted, which could result in a much reduced crop in 2017.

OILCROPS, OILS AND MEALS [1]

Major Oilseed Exporters and Importers



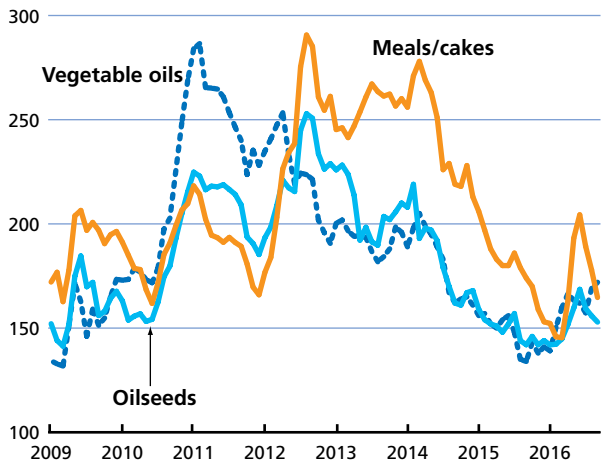
PRICES[2]

After gaining strength earlier this year, international prices for oilseeds, oils and meals have entered a phase of instability

Overall, the 2015/16 (October/September) season saw a tightening in market fundamentals of the oilcrops complex, particularly in the oils/fats segment. Consequently, international prices of both oilseeds and oilseed products trended upward during 2015/16, as reflected by FAO's monthly price indices for oilseeds, oils and meals. Regarding oilseeds and oils, the prolonged decline in the respective price indices came to a halt towards the end of 2015, and values started firming from February 2016 onward. In the case of meals, the rebound in the FAO meal price index began in April 2016.

For oilseeds and meals, the recovery in international prices primarily reflects developments in the soybean market, notably deteriorating crop prospects in South America, combined with firm global import demand. Interestingly, since July 2016, world prices for oilseed and meals have lost some of their strength, as markets started to be influenced by the production outlook for 2016/17, with brighter than originally anticipated soybean crop prospects in the United States.

Figure 1. FAO monthly international price indices for oilseeds, vegetable oils and meals/cakes (2002-2004=100)



[1] Almost the entire volume of oilcrops harvested worldwide is crushed to obtain oils and fats for human nutrition or industrial purposes, and to obtain cakes and meals that are used as feed ingredients. Therefore, rather than referring to oilseeds, the analysis of the market situation is mainly undertaken in terms of oils/fats and cakes/meals. Production data for oils and meals are derived from domestic production of the relevant oilseeds in a specific year, i.e. they do not reflect the outcome of actual oilseed crushing in a given country and period. Regarding oilseed trade, situations where oilseeds are produced in one country but crushed in another one are reflected in national oil/meal consumption figures. It is important to note that data on trade in oils (meals) refer to the sum of trade in oils (meals) plus the oil (meal) equivalent of oilseeds traded. Similarly, stock figures for oils (meals) refer to the sum of oil (meal) stocks plus the oil (meal) equivalent of oilseed inventories.

[2] For details on prices and corresponding indices, see Statistical appendix Table 23

Figure 2. FAO monthly price index for oilseeds (2002-2004=100)

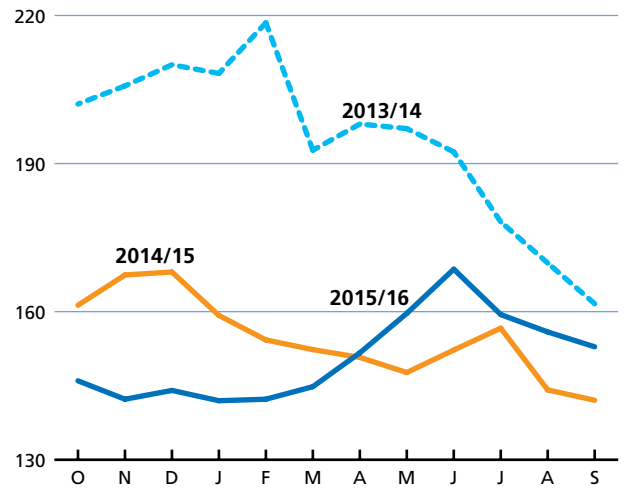


Figure 3. FAO monthly price index for vegetable oils (2002-2004=100)

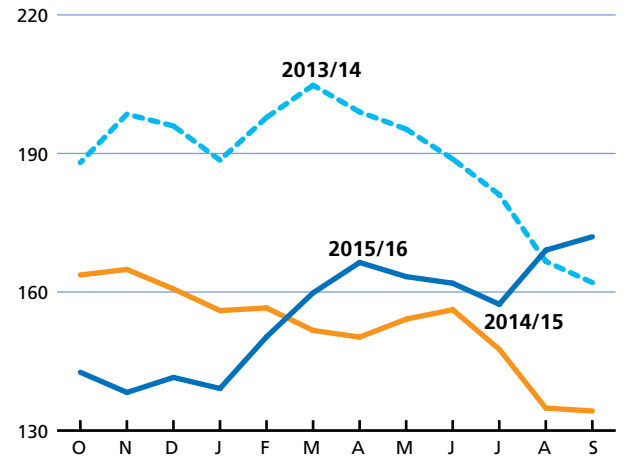


Figure 4. FAO monthly price index for oilmeals/cakes (2002-2004=100)

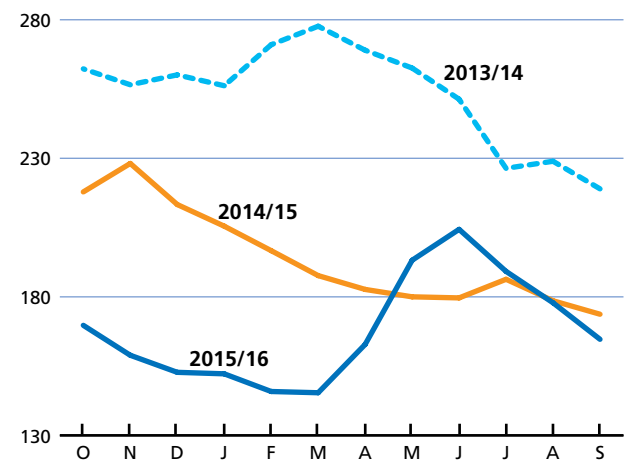
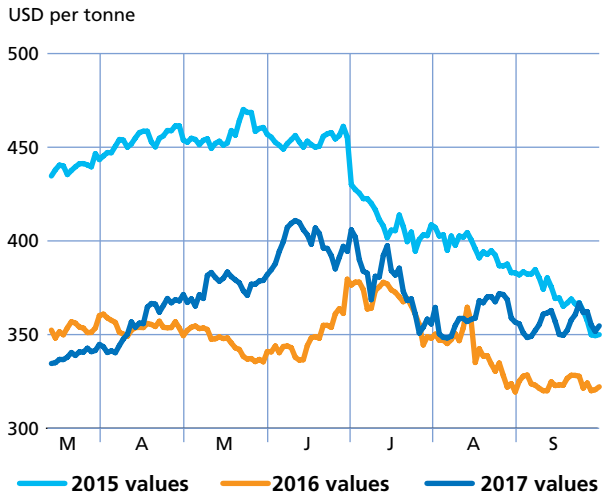


Figure 5. CBOT soybean futures for March



In the oils/fats market, price developments have been dominated by palm oil, the world's most consumed oil. The concurrence of poor palm oil production in Southeast Asia with robust global import demand for the oil drove a rebound in international oils/fats quotations in early 2016. More recently, world oil/fats prices exhibited some instability, mainly reflecting trade uncertainties regarding the level of global palm oil export availabilities.

Preliminary forecasts for 2016/17 point to a broadly balanced global supply and demand situation in both the meal and the oils markets – which, if confirmed, would provide limited scope for marked upward or downward movements in prices. Relatively stable Chicago Board of Trade futures prices for soybeans since the second half of July 2016 tend to confirm this picture. However, prices could be volatile over the coming months, influenced by changes in the production forecasts for soybeans in South America and palm oil in Southeast Asia, as well as uncertainties regarding the development of global oil and meal demand.

OILSEEDS

2016/17 production poised to set a new record

After contracting by about 3 percent in 2015/16, global oilseed production is forecast to climb to an all-time high in 2016/17. The anticipated year-on-year rise of 4 percent would be led by soybean, although sizeable increases are also likely for sunflowerseed, groundnut, cottonseed, palmkernel and copra. Rapeseed, would stand out as an exception, as its output is forecast to drop for the second consecutive year.

Global 2016/17 soybean production – currently pegged at 330 million tonnes – is expected to fully recover from

last season's drop, and possibly rise above the 2014/15 record. At the global level, the expansion would be driven almost entirely by record-high yields, given only marginal gains in area harvested. In the Northern Hemisphere, where harvesting is now underway, output reductions in Canada and Ukraine should be more than offset by large increases in the United States, China and India. In the **United States**, the world's leading soybean producer, latest estimates point to a 7 percent (7.4 million tonnes) rise in production, underpinned by favourable growing conditions which boosted average yields to an unprecedented 3.4 tonnes per hectare. **India**'s output is anticipated to expand by 34 percent above last year's 4-year low, thanks to beneficial rainfalls. In **China**, where gradual cuts in sown area have caused production to trend downward since 2011/12, increased support payments for soybeans (introduced to promote soy production at the expense of maize) resulted in a marked expansion in plantings and output. On the other hand, **Canada**'s production should drop on unfavourable weather conditions, while in **Ukraine** production is expected to fall on lower plantings. In South America, where sowing of the 2016/17 crop has just started, production is projected to recover from last season's drop, on expectations of a return to normal weather conditions and a modest increase in area planted. **Brazil** is expected to drive the region's recovery, largely thanks to anticipated improvements in yields. With regard to area sown, better return prospects for competing crops, notably maize, and high production costs are expected to curb Brazil's annual growth in soy plantings to less than 2 percent – well below the 5-year average of 6–7 percent. While a similar growth pattern is forecast for **Paraguay** and **Uruguay**, output could tumble to a 3-year low in **Argentina**, as soy plantings are expected to shrink in the wake of export policy changes that favour crops other than soybeans, but also because of pressing crop rotation needs.

World rapeseed production is forecast to contract by a further 3–4 percent in 2016/17, reflecting poor harvest prospects in all key producing countries, except India and Australia. While crops in the **EU** suffered from adverse weather, outputs in **Canada**, **China** and **Ukraine** were affected by declines in area planted. By contrast, **India** is set to harvest a large crop, thanks to higher plantings and adequate rainfall, while, in **Australia**, production could receive a boost from improved yields.

World sunflowerseed production is set to grow for the second year in succession, possibly reaching an all-time high, underpinned by record plantings. While larger sowings should drive growth in **CIS** countries and **Argentina**, favourable growing conditions are expected to bolster output in the **EU**. Also global groundnut production could reach a record-high, following a strong rebound in plantings and yield improvements. Plantings have been stepped up in the world's two leading producers, **China** and **India**, and near-record yields are expected in the **United States** and **Argentina**. As to cottonseed, global output could partially recover from last season's drop, primarily reflecting better yields. Upturns are expected in the **United States**, **India**, **Pakistan** and **Australia**, whereas **China**'s production could continue to fall. Global palmkernel and copra outputs are set to recover, with improvements concentrated in Southeast Asia.

Table 1. World production of major oilcrops

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change 2016/17 over 2015/16
		million tonnes		%
Soybeans	320.0	314.4	329.5	4.8
Rapeseed	71.4	69.9	67.4	-3.5
Cottonseed	45.4	38.2	40.3	5.4
Groundnuts (unshelled)	38.1	37.6	40.5	7.7
Sunflower seed	41.1	42.2	45.9	8.7
Palm kernels	15.4	14.7	15.8	7.5
Copra	5.8	5.4	5.8	8.2
Total	**537.0**	**522.5**	**545.3**	**4.4**

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]

Global oils/fats production to resume growing in 2016/17

The above positive crop projections translate into a 4–5 percent expansion in global oils/fats production in 2016/17 – in contrast to last season's exceptional drop. Global output is tentatively pegged at 217 million tonnes, marking a historic record. Output growth would be led by palm oil, followed by soybean, sunflowerseed, groundnut and palmkernel oil, while production of rapeseed oil could drop for the third consecutive year. Palm oil production, which experienced unprecedented losses in 2016 due to El Niño, is expected to rebound next year, as palms in **Malaysia** and **Indonesia** begin to recover from the protracted effects of poor rainfall in late 2015 and early 2016. Next year's palm oil production is tentatively pegged

[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 2. World oilcrops and product market at a glance

	2014/15	2015/16 *estim.*	2016/17 *f'cast*	Change: 2016/17 over 2015/16
		million tonnes		%
TOTAL OILCROPS				
Production	549	534.1	556.9	4.3
OILS AND FATS [1]				
Production	210.8	207.3	216.5	4.4
Supply [2]	247.3	246.3	250.5	1.7
Utilization [3]	206.2	211.2	217.3	2.9
Trade [4]	114.3	115.8	119.4	3.1
Global stock-to-use ratio (%)	*18.6*	*16.3*	*15.6*	
Major exporters stock-to-disappearance ratio (%) [5]	*10.7*	*9.7*	*10.0*	
MEALS AND CAKES [6]				
Production	141.1	137.9	143.9	4.4
Supply [2]	162.6	164.1	168.1	2.4
Utilization [3]	133.4	139.1	144.0	3.5
Trade [4]	86.7	90.5	93.5	3.3
Global stock-to-use ratio (%)	*18.7*	*16.0*	*15.5*	
Major exporters stock-to-disappearance ratio (%) [7]	*10.6*	*9.1*	*9.5*	
FAO PRICE INDICES (Oct/Sept) (2002-2004=100)	**2013/14**	**2014/15**	**2015/16**	**Change: 2015/16 over 2014/15 %**
Oilseeds	194	155	151	-2.5
Oilmeals/cakes	253	194	168	-13.4
Vegetable oils	189	153	155	1.7

Note: Refer to footnote 1 on page 40 for overall definitions and methodology.

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 Major exporters include Argentina, Brazil, Canada, Indonesia, Malaysia, Ukraine and the United States.
6 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.
7 Major exporters include Argentina, Brazil, Canada, India, Indonesia, Malaysia, Paraguay, the Russian Federation, Ukraine, Uruguay and the United States.

at 35.1 million tonnes in Indonesia and 20.5 million tonnes in Malaysia. Further expansion of the mature oil palm area should contribute to the portended growth, especially in Indonesia.

Global 2016/17 oils/fats supplies, which comprise 2016/17 production and 2015/16 carry-over stocks, are currently forecast at 251 million tonnes, which entails a modest year-on-year improvement. Last season's conspicuous drop in global inventories would weigh on supply growth in 2016/17. Domestic availabilities could resume growing in several important producing countries, notably **Australia**, **Brazil**, **India**, **Indonesia**, **Malaysia**, the **Russian Federation**, **Ukraine** and the **United States**. On the other hand, domestic supply contractions are expected in **Argentina**, **Canada**, **China** and the **EU**, mostly reflecting both low crop outturns and reduced carry-in stocks.

Global oils/fats utilization set to expand further

World consumption of oils/fats in 2016/17 is tentatively pegged at 217 million tonnes, implying a more dynamic growth of 3 percent compared to last year's.

With regard to individual oils, soy and palm oils should experience a brisk consumption growth, supported by adequate supplies and price discounts relative to other vegetable oils. A sizeable expansion is also forecast for sunflowerseed oil, given the prospective pronounced gain in production. Conversely, the consumption of rapeseed oil could undergo a marked drop.

While population and economic growth remain the key drivers behind the rising uptake of oils/fats for food and traditional industrial uses, protracted slow economic growth in several countries, together with firmer international oils/fats prices, could temper the expansion of oils/fats consumption in 2016/17. Furthermore, growing demand by the biodiesel industry continues to play a limited role. During 2016/17, a pronounced acceleration in global oils/fats uptake by the biodiesel industry seems unlikely. While mandatory blending rates may be raised in a number of countries, uncertainties remain regarding the extent to which national targets for biodiesel are being met. Moreover, persistently weak world prices for crude mineral oil continue to discourage discretionary blending of diesel with biodiesel.

Developing nations in Asia are expected to continue driving growth in global oils/fats uptake. Steady expansion is forecast for **India** and several other Asian countries. By contrast, in **China**, growth could falter on a possible slowdown in national economic growth. Also in **Malaysia** and **Indonesia**, consumption may grow less than last year, considering that demand from the biodiesel industry could expand at a slower pace. Elsewhere, bumper supplies should support higher consumption in the **United States**, **Brazil** and **Argentina**, where oil uptake could be fuelled in part by fresh demand from the biodiesel sector. In other developed countries, utilization growth rates are expected to linger around 1 percent, except in the **EU**, where the anticipated contraction in rapeseed oil availabilities could notch down consumption.

Figure 6. Global production and utilization of oils/fats

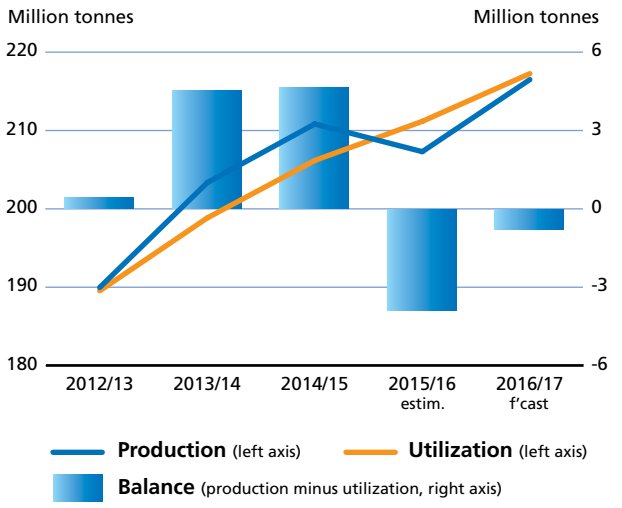
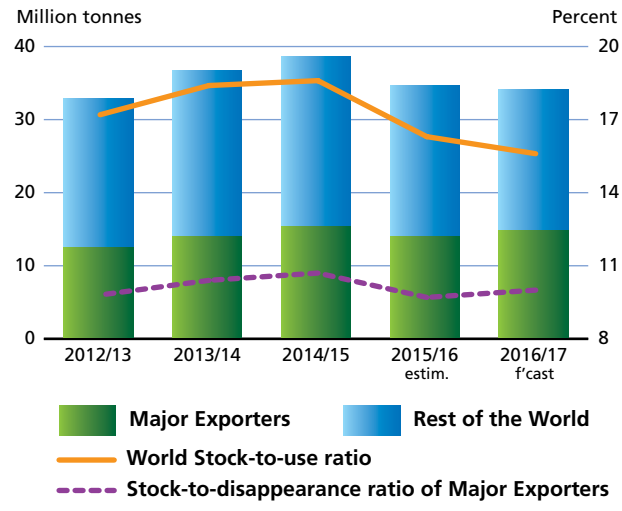


Figure 7. World stocks and ratios of oils/fats (including the oil contained in seeds stored)



Global oils/fats inventories unlikely to recover in 2016/17

A shortfall of global oils/fats production relative to consumption could be witnessed again in 2016/17. However, the gap between demand and production is currently estimated at less than 1 million tonnes – compared with last season's 4 million tonne difference. Consequently, an additional, modest contraction in global inventories cannot be excluded. Currently, global oils/fats stocks (including the oil contained in stored oilseeds) are forecast to contract by about 0.6 million tonnes or 1.6 percent in 2016/17. Commodity-wise, soybean and rapeseed oil reserves may record conspicuous drops, which would be partly offset by stock replenishments in palm, sunflowerseed and groundnut oil. At country level, significant stock drawdowns are anticipated in **China** and **Argentina**. In China, the drawdown would concern government stockpiles of rapeseed oil. On the other hand, **Indonesia** and **Malaysia** are expected to replenish their palm oil stocks, while, in the **United States**, a further accumulation in soybeans/soybean oil reserves is expected.

While the above forecasts would lead to a further, moderate drop in the global stock-to-use ratio for oils/fats in 2016/17, the stock-to-disappearance ratio for the major exporting countries[4] could actually inch up.

Growth in oils/fats trade to accelerate in 2016/17

Global trade in oils/fats – including the oil contained in traded oilseeds – is forecast to reach 119 million tonnes in 2016/17, expanding at least twice as fast as last season, when a contraction in palm oil transactions weighed on global trade.

Sustained by production gains in major exporting countries and a trimming in prices, trade in palm oil, the world's most widely shipped oil, is expected to recover fully, driving global trade growth in 2016/17. More competitive prices should allow palm oil to gain back the market share it lost to other oils (notably soybean oil) last season. As to other oils/fats, only sunflower oil trade should post a sizeable increase, facilitated by record supplies. Transactions in soybean oil, the world's second most traded oil, are projected to remain flat, while rapeseed oil trade may contract.

[4] Argentina, Brazil, Canada, Indonesia, Malaysia, Ukraine and the United States. Disappearance is defined as domestic utilization plus exports.

Figure 8. Oil/fat imports by region or major country (including the oil contained in seed imports)

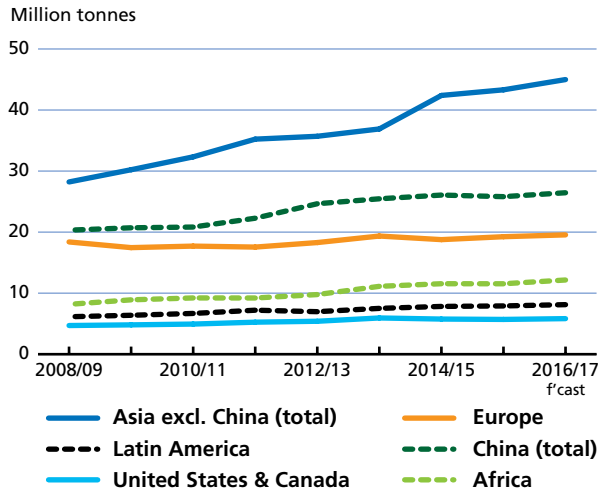
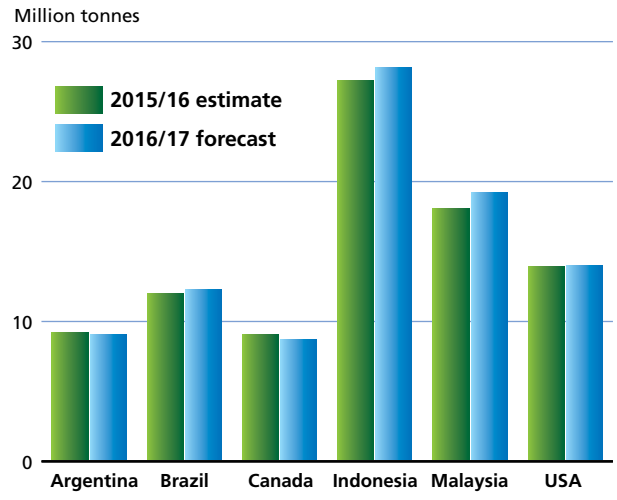


Figure 9. Oil/fat exports by major exporters (including the oil contained in seed exports)



On the import side, **India**'s purchases are projected to grow at a below average rate, provided the country's bumper crops are confirmed. In **China**, import growth could be limited to 2–3 percent, due to subdued consumption, and also because the country can rely on large inventories to satisfy domestic demand. Sustained import growth is expected in other countries in Asia as well as in Africa. Net purchases by the **EU** and other developed countries are forecast to increase marginally, reflecting stagnation or only minimal growth in domestic consumption.

Global export growth would rest strongly on a marked rebound of palm oil shipments from **Malaysia** and **Indonesia**, although sizeable increases in oils/fats sales are also expected for **Ukraine**, the **Russian Federation**, **Brazil** and **Australia** – all facilitated by marked year-on-year gains in domestic output. By contrast, in **Canada**, the prospective fall in domestic output is likely to prompt a contraction in exports. A cut in net exports may also occur in **Argentina**, where foreign sales could be trimmed to satisfy additional domestic demand from biodiesel producers. Shipments from the **United States**, which surged to unprecedented levels in the last two seasons, are anticipated to remain flat in 2016/17.

MEALS AND CAKES[5]

Global meal production set to recover in 2016/17

Based on current crop forecast, in 2016/17, global meal production could more than recover from last season's setback. Growing by over 4 percent, output is pegged at an unprecedented 144 million tonnes (expressed in protein equivalent). The recovery primarily concerns soybean meal, which, along with higher sunflower, cotton, groundnut palmkernel and fish meal production, would outweigh a drop in rape meal output.

Global oilmeal supplies, which also include 2015/16 carry-out stocks, are projected to expand by 2–3 percent, i.e. less than global production, because of a marked contraction in inventories last season. In the **United States**, fuelled by bumper crops and large carry-in stocks, domestic availabilities could expand further. Conspicuous supply increases are also forecast for **Brazil** and **India**. By contrast, sizeable contractions could occur in **Argentina**, **Canada**, **China** and the **EU**, owing to both modest crop outturns and reduced opening stocks. In China, the world's top consumer, domestic supplies could drop to a four-year low. Aggregate availability of the United States, Argentina and Brazil – the world's three dominant meal suppliers – could swell to 105 million tonnes (in protein equivalent).

Meal consumption to rise further in 2016/17, albeit at a reduced pace

Pegged at a record 144 million tonnes (expressed in protein equivalent), global meal/cake consumption would continue to expand in 2016/17, albeit at a below average rate. Growing uptake by the livestock sector arising from further economic growth in several countries should continue to support meal consumption However, similar to last season, the availability of bumper feed grain supplies worldwide is expected to weigh on meal utilization growth. As in previous years, much of this growth would be on account of soybean meal, although consumption of sunflowerseed meal could also rise conspicuously. By contrast, rapeseed meal uptake could drop to a 3-year low.

Developing countries in Asia should remain the main engine of overall consumption growth. However, in **China**, the world's largest meal consumer, the economic slowdown could trim the expansion in poultry and pig-meat production and, with it, demand for meals. In addition, ample supplies of attractively priced feed grains will weigh on domestic meal demand. In other Asian countries, consumption is anticipated to rise at about average rates, including in **India**, **Indonesia**, **Pakistan**, the **Philippines**, **Turkey** and **Vietnam**. Elsewhere, the current forecasts

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

Figure 10. Global production and utilization of meals/cakes (in protein equivalent)

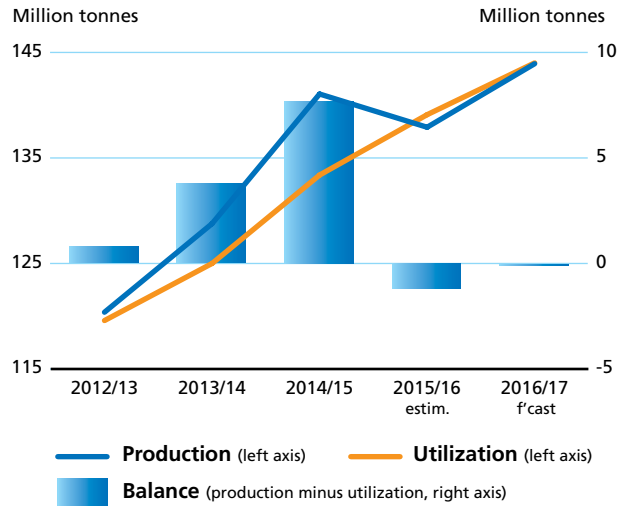
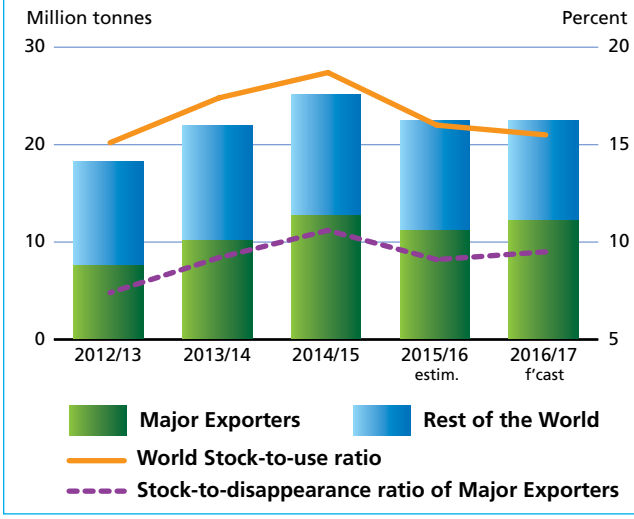


Figure 11. World stocks and ratios of meals/cakes (in protein equivalent and including the meal contained in seeds stored)



point to a further expansion in demand in **Argentina**, while only moderate increases are expected in the **United States** and **Brazil**. In the **EU**, the world's second largest consumer, meal uptake could stall at last season's level, due to both reduced meal supplies and burgeoning feed grain availabilities.

Global meal inventories to remain unchanged

Based on current forecasts, in 2016/17, global meal output would basically match consumption – as opposed to last season, when production fell short of demand, triggering a drawdown in world inventories. Consequently, in 2016/17, global oilmeal stocks (including the meal contained in stored seeds) are expected to remain virtually unchanged, including stable reserves of soymeal, the world's dominant oilmeal. Regarding the other meals, replenishments in sunflower, groundnut and cottonseed meal should offset a drop in rape meal inventories.

In **China**, **Argentina** and the **EU**, sizeable stock reductions are expected to make up for poor domestic supplies as well as, in the case of Argentina, to support higher exports. The largest drawdowns concern China, consistent with government efforts to curb state stockpiles, and Argentina, where reserves have reached burdensome levels. The above reductions should be offset by additional replenishments in the **United States**, where, boosted by bumper crops, carry-out stocks are projected to climb to a 10-year high. Healthy domestic supplies should also facilitate stock replenishments in **India**, **Brazil** and **Australia**.

Based on the above forecasts, the global stock-to-use ratio for meals/cakes would drop somewhat compared with last season's level, whereas the stock-to-disappearance ratio for the major exporting countries[6] would show a slight improvement.

Expansion in global meal trade may slow down further

International meal trade (including the meal contained in traded oilseeds) is forecast to grow only moderately in 2016/17. Thanks to ample supplies and competitive prices, soybean meal should continue to drive expansion, aided by sunflower meal. Moderate rises are also expected for the other meals, except rapeseed meal, which could tumble to a 4-year low in transactions.

With regard to imports, Asian countries would continue to dominate demand. However, in **China**, the world's top importer, purchases are forecast to rise by only 2 percent – the lowest rate in four years. The slowdown would stem from the anticipated rebound in domestic soy production, continued sales from state stockpiles, and faltering growth in local meal demand. In other countries in Asia, robust growth in import demand is expected to continue. As to developed countries, in the **EU**, the world's second largest buyer, the anticipated tightening in domestic supplies of rapeseed meal could propel overseas purchases upwards.

Export growth is expected to concentrate in South America (provided the current soybean production forecasts materialize), as well as the United States and India. South America's export expansion would be led by **Brazil**, the

[6] Argentina, Brazil, Canada, India, Indonesia, Malaysia, Paraguay, Russian Federation, Ukraine, Uruguay and the United States. Disappearance is defined as domestic utilization plus exports.

Figure 12. Meal/cake imports by region or major country (in protein equivalent and including the meal contained in seed imports)

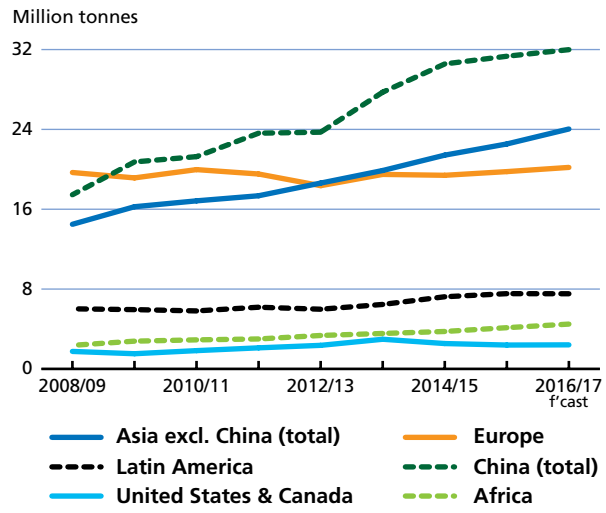
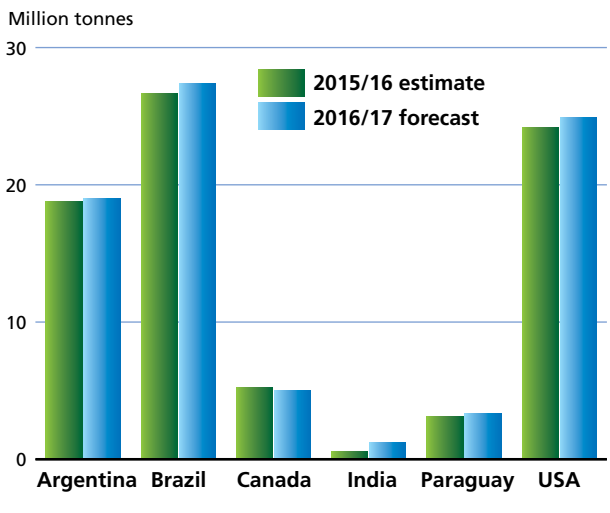


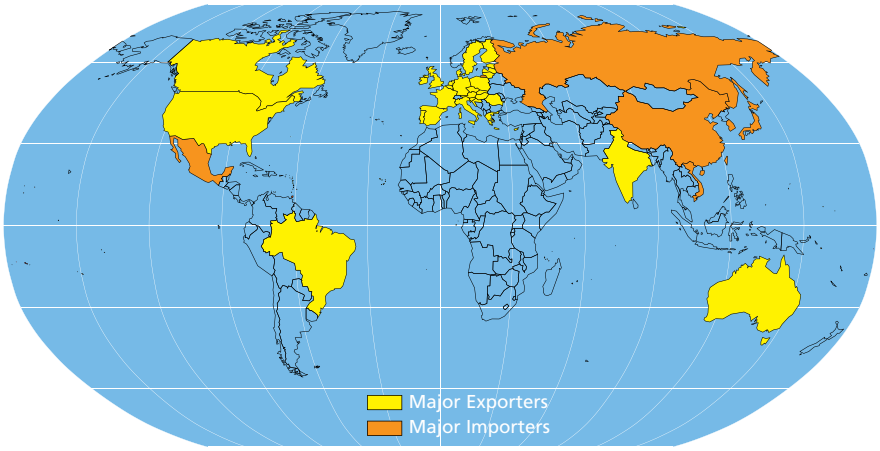
Figure 13. Meal/cake exports by major exporters (in protein equivalent and including the meal contained in seed exports)



world's top exporter, along with smaller increases in **Argentina** and **Paraguay**. Brazil's sales could rise by 1.7 million tonnes (in product weight and including the meal contained in soybean shipments), which would be well below last year's increase. Although domestic supplies would support larger sales, the recent strengthening of the Real vis-à-vis the US dollar has made Brazil's exports less competitive. In Argentina, the rise in deliveries would have to rely on the release of old-crop inventories, given the prospective stagnation of domestic production. Sales by the **United States**, the world's second largest supplier, are projected to expand by a further 1.7 million tonnes, facilitated by bumper crops. In **India**, which saw its exports tumble over the last three years, better crops should support a rebound in shipments, allowing the country to regain, at least in part, its position as a supplier to the Asian meal market.

MEAT AND MEAT PRODUCTS

Major Meat Exporters and Importers



PRICES

After remaining at a low level during the first three months of 2016, when it averaged 146 points, the **FAO Meat Price Index** recorded sustained growth between April and September, rising by 17.7 points, or 12.1 percent, to reach 163.5 points. Over the period January to September, the index rose by 12.6 percent, supported by an upswing in the international prices of ovine meat, pigmeat and poultry meat, which, for the group, rose by an average of 18.7 percent, and a more moderate gain of 4.3 percent for bovine meat. Limited supplies of pigmeat in the European Union and sheep meat from Oceania lent support to prices for these products, while firm international demand, in particular from Asia, underpinned poultry meat prices. Meanwhile, recovery in bovine meat production in the United States reduced its need for external supplies, contributing to international prices rising by less than that recorded for the other categories of meat. Despite its recent increase, the overall meat price index in September 2016 was down 2.4 percent compared to a year earlier.

Production stagnates, but trade recovers

World meat production is anticipated to stagnate in 2016, rising by a meagre 0.2 percent to 319.8 million tonnes. Output is expected to grow in the United States, the EU, Brazil, India, Mexico, Canada and the Russian Federation. However, down-turns elsewhere, especially in China, but also in Australia, would weigh on the overall trend.

Figure 1. Modest recovery in international prices in 2016 (2002-2004=100)

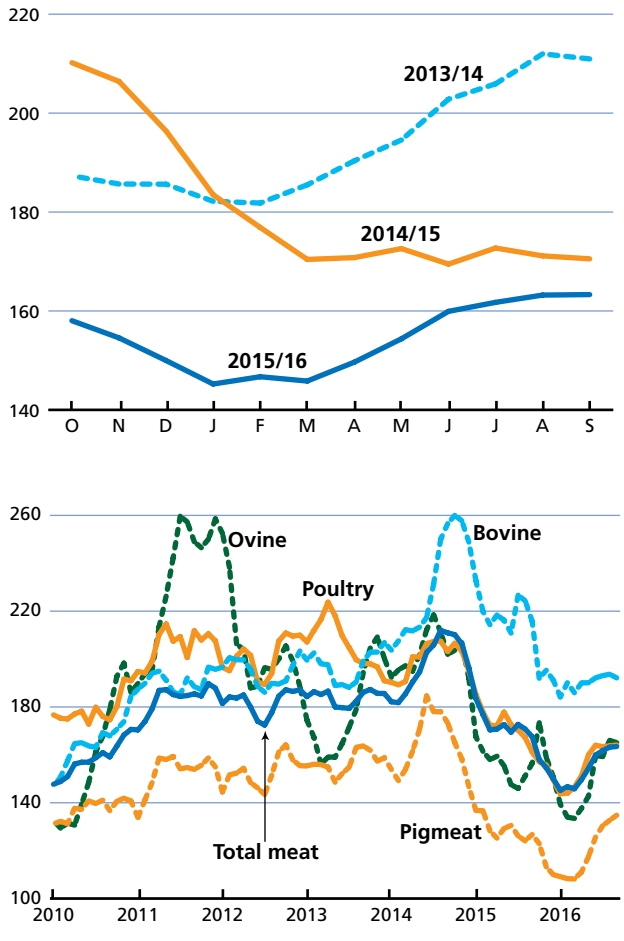


Table 1. World meat market at a glance

	2014	2015 estim.	2016 f'cast	Change: 2016 over 2015
	million tonnes			%
WORLD BALANCE				
Production	**315.4**	**319.2**	**319.8**	**0.2**
Bovine meat	68.0	67.6	67.8	0.3
Poultry meat	111.0	114.8	115.8	0.9
Pigmeat	116.9	117.2	116.5	-0.6
Ovine meat	13.9	14.0	14.1	0.6
Trade	**30.7**	**29.8**	**31.1**	**4.4**
Bovine meat	9.6	9.1	9.1	0.3
Poultry meat	12.7	12.2	12.7	4.4
Pigmeat	7.1	7.2	8.0	10.8
Ovine meat	1.0	1.0	0.9	-2.8
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	43.2	43.2	42.8	-1.0
Trade - share of prod. (%)	*9.7*	*9.3*	*9.7*	*4.2*

FAO MEAT PRICE INDEX (2002-2004=100)	2014	2015	2016 Jan-Sept	Change: Jan-Sep 2016 over Jan-Sep 2015 %
	198	168	154	-10.6

Excluding these two countries, aggregate meat production of the rest of the world would rise by 1.4 percent. Among the various sectors, production is forecast to grow marginally in the case of poultry, ovine and bovine meat, while it could fall slightly for pigmeat.

After a dip in 2015, global meat trade is forecast to recover by 4.4 percent in 2016, to 31.1 million tonnes. Based on current expectations, trade in pigmeat is set to increase by 10.8 percent, poultry meat by 4.4 percent and bovine meat by 0.3 percent, while ovine meat may decrease by 2.8 percent from last year.

Increased meat imports are expected particularly in China, but also in Japan, South Africa, Chile, the Republic of Korea, Mexico, the EU, Iraq, the Philippines, Viet Nam, the United Arab Emirates and the Russian Federation by contrast, growth in domestic production may result in reduced purchases by the United States and Canada, with Angola also anticipated to buy less. The expansion in world exports is projected to be led by Brazil and the EU, followed by the United States and Canada, with sales also rising for Belarus, Thailand, the Russian Federation, Paraguay, Mexico and Ukraine. Meanwhile, exports by Australia, China, Turkey, South Africa, New Zealand, Argentina and India are likely to be curtailed.

BOVINE MEAT

Production: little growth

Bovine meat production in 2016 is forecast to grow by 0.3 percent, to 67.8 million tonnes. Substantial output increases are anticipated in the **United States** and the **European Union**, while a sizable drop is foreseen for **Australia**, with declines also expected for **Brazil**, **Argentina**, the **Russian Federation** and **New Zealand**.

In *Latin America and the Caribbean*, mixed weather, stemming from *El Niño*, brought exceptionally dry conditions to some parts of the region, while others experienced excessive rainfall and flooding. **Brazil** experienced widespread dry conditions during the first part of the year, which adversely affected pasture conditions and caused a substantial rise in feed costs. Yet, favourable international demand encouraged producers to expand herds, even though domestic demand remained subdued. As a consequence, Brazil's bovine meat production may fall by 1.5 percent to 9.3 million tonnes. In neighbouring **Paraguay**, productivity increases are expected to boost growth, spurred by international demand. In **Argentina**, a 2.2 percent drop in output to 2.7 million tonnes is predicted, as more calves and cows are retained to facilitate herd expansion. The lifting of the export restrictions is anticipated to result in the longer retention of cattle to attain heavier slaughter weights preferred by international markets, rather than the lighter animals favoured by domestic consumers. Meanwhile, in **Chile, Colombia** and **Ecuador,** chronic dry-to-drought conditions experienced at the start of the year are anticipated to cause output to fall. In **Mexico**, production is expected to be slightly up on last year, as heavier carcass weights should more than offset a decline in cattle slaughtered.

In *Asia*, subdued international demand for buffalo meat is forecast to slow growth in bovine meat production in **India**, which exports approximately 70 percent of its output. In **China**, stable prices are attracting investment in bovine meat production and a limited increase in output could occur. Elsewhere, output is forecast to drop in the **Republic of Korea**, where improved prices have encouraged herd rebuilding, while some small-scale producers have left the industry. Output could also fall in **Japan**, due to continued herd reduction and farmers retiring. In *Africa*, some parts of the continent, including **Burundi, Kenya, Rwanda, Tanzania** and **Uganda**, received abundant rain which led to pasture recovery and replenishment of water resources, auguring well for bovine meat production in 2016. Meanwhile, in southern Africa, many areas experienced dry-to-drought conditions in 2015, which persisted into 2016, negatively affecting pastures

and feed availability. As a consequence, the sector's growth may be constrained in this subregion.

In *North America*, bovine meat production in the **United States** is forecast to rise by almost 5 percent, as a result of larger numbers of cattle slaughtered and heavier slaughter weights. Output, foreseen at 11.3 million tonnes, would be the highest in three years. The long-term herd decline in **Canada**, evident since 1992, may have come to an end, with expansion in cattle numbers forecast in 2016. Despite lower slaughter numbers, increased carcass weights could maintain the country's bovine meat production at some 1.1 million tonnes.

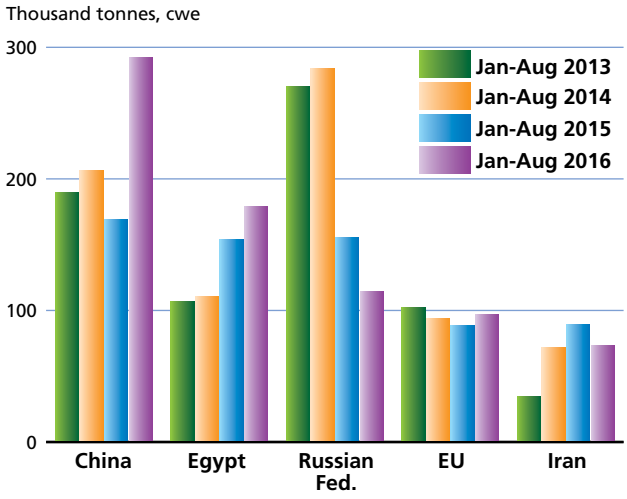
In **Australia**, following three years of dry weather, improved rainfall in many parts of the country have improved pasture conditions and encouraged stock retention. However, a further fall in the size of the national herd is expected, due to the high level of cow slaughter in the preceding two years, thus constraining recovery. Concomitant on herd rebuilding, bovine meat production in Australia could fall to 2.0 million tonnes, a 15 percent decline from 2015. Likewise, output in **New Zealand** may slide by 5.8 percent to 650 000 tonnes, as high international bovine meat prices and sharply lower milk pay-outs prompted farmers to reduce both beef and dairy herds in 2015, resulting in a smaller calf crop.

In the **Russian Federation**, 2016 bovine meat output may drop by 3.3 percent to 1.55 million tonnes, as a result of herd reduction stemming from poor profitability discouraging investment. In the **European Union**, production could rise by 2.2 percent, owing to an increase in dairy cow culling in many member countries in response to low milk prices.

Trade: steady

Subsequent to a decline of 5 percent in 2015, world trade in bovine meat in 2016 is anticipated to remain at around 9.1 million tonnes. For exports, growth in *the Americas,* notably **Brazil**, **Paraguay**, **Canada**, the **United States** and **Mexico**, and in *Europe,* namely **Belarus** and the **European Union**, is projected to be counterbalanced by significantly reduced sales by **Australia** and diminished shipments by **South Africa**, **India** and **New Zealand**. **Brazil** is forecast to regain its position as the world's principal bovine meat exporter, superseding India, which held the spot in 2014 and 2015. Brazil's deliveries could increase by 12.5 percent to 1.8 million tonnes, assisted by depressed domestic consumption. Shipments by Brazil surged during the first eight months of 2016, partly due to **China** lifting of a two-and-a-half year embargo, imposed after a case of atypical bovine spongiform encephalopathy (BSE) in Brazil. On the other hand, deliveries by **Australia** are forecast to drop

Figure 2. Bovine meat exports: Brazil major markets



by over 15 percent, due to a reduction in cattle numbers and the commencement of herd rebuilding. After falling by 13 percent in 2015, **India's** bovine meat exports are expected to remain around 1.7 million tonnes in 2016 – between January and May, exports to **Vietnam** and **Egypt** grew substantially, while augmented competition from suppliers in South America caused sales to **Thailand**, in particular, but also other to countries in Southeast Asia and in the Middle East to fall.

Among bovine meat importers, a number of countries in Asia are forecast to step up their purchases in 2016, especially **China,** the **Republic of Korea** and **Vietnam**, but also **Chile**, the **Islamic Republic of Iran,** the **European Union** and **Egypt**. The increases are anticipated to be almost matched by a steep fall in deliveries to the **United States**, plus more contained declines in sales to the **Russian Federation**, **Angola, Japan** and **Canada**. After tepid growth in 2015, **China**'s imports are forecast to soar by over 15 percent to 1.4 million tonnes, with most of the supplies originating from South America, especially **Brazil**, but also **Uruguay**. **Brazil** is also forecast to be the main beneficiary of expanded imports by the Islamic **Republic of Iran** and **Chile**, while the **Republic of Korea** and **Vietnam**, respectively, are predicted to source their augmented purchases mainly from the **United States** and **India**. Imports by the **United States** are forecast to drop significantly, by 13 percent to 1.2 million tonnes, as domestic bovine meat production is set to recover. Bovine meat purchases by the **Russian Federation** are anticipated to drop by 7.8 percent to 470 000 tonnes.

PIGMEAT

Production: stagnates

World production of pigmeat is forecast to decrease marginally in 2016, by 0.6 percent to 116.5 million tonnes, thus registering a second year of stagnation. As in 2015, contraction in output in **China**, which accounts for almost half of the world's total, is the main reason for the slowdown, as low profitability and new environmental regulations caused farmers to reduce breeding sows for a second year in succession. China's 2016 production is posited at 54 million tonnes, down 2.5 percent from 2015. Elsewhere in *Asia*, modest production growth is forecast for **Viet Nam** and the **Republic of Korea**, but also for **Japan** and the **Philippines** where the industry is recovering from outbreaks of porcine endemic diarrhoea (PED), which reduced piglet numbers in the previous two years. Recovery from the effects of PED has been faster in the **United States**, where a second year of growth is anticipated, with production potentially increasing by 1.9 percent to a record 11.3 million tonnes. Output in **Mexico** also continues to recover, following a PED outbreak in 2014, and may rise in 2016 by almost 5 percent to 1.4 million tonnes. Elsewhere in the *Americas*, international demand is forecast to result in boosted production in **Brazil** and **Canada**. In the **Russian Federation**, the pace of progression in pigmeat production could slacken, as a result of low domestic prices and competition from imports. Meanwhile, output in the **European Union** is likely to be essentially unchanged, at 23.4 million tonnes, consequent to a decline in breeding sow numbers, brought about by low prices in 2015 and the first half of 2016.

Trade: surges

Trade in pigmeat is set to record exceptional growth in 2016, increasing by as much as 10 percent to reach a historical high of 8 million tonnes. A surge of imports by **China** is projected to be the main engine of growth. The country, which is set to confirm its status as the main market for pigmeat for the second year, could see its purchases increase by more than 30 percent, attendant on reduced domestic production. Notably larger imports are also anticipated for the **Russian Federation** and **Japan**, in addition to **Viet Nam**, **Mexico**, **Chile** and the **United States**.

The buoyant world import demand is expected to result in increased exports mainly for the **European Union**, followed by **Brazil** and **Canada**, while sales by the **United States** could remain similar to last year. The **European Union** may see an upswing in sales of over 20 percent, surpassing the vibrant growth experienced in 2015. European Union exporters have adjusted to the 2014 **Russian Federation** embargo by seeking alternative markets, particularly in *Asia* and especially in **China**. Half-year shipments by the European Union to China rose by almost 160 percent, with substantial expansion also seen in sales to Japan, the United States and the Philippines. Brazil is anticipated to see its exports increase by around 25 percent, based on greater trade with Asia, especially China (Hong Kong, SAR), but also with neighbouring Chile, Argentina and Uruguay. Similarly, half-year data for **Canada** show a swell in sales to **China**, which rose by over 150 percent, leading to exports to practically all other destinations falling during the period. An analogous situation occurred in the United States, where half-year exports to China more than doubled, causing sales to a number of its major markets to drop.

Figure 3. Feed/price relationship relatively favourable for pigmeat and poultry producers

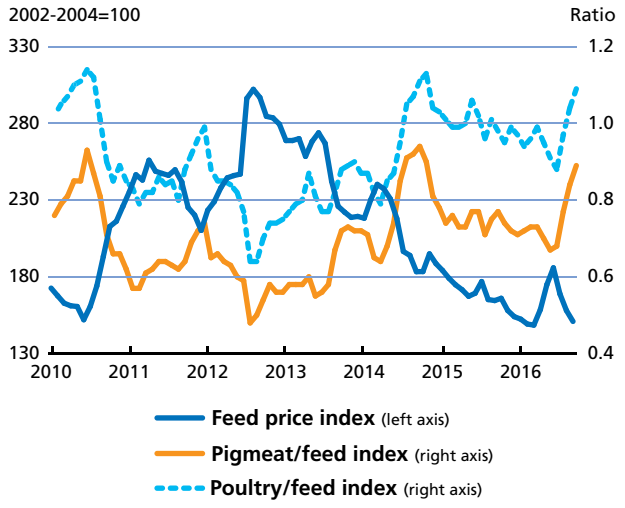
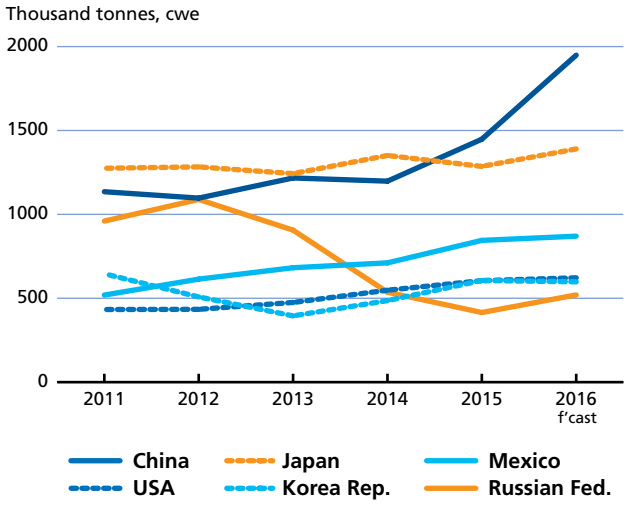


Figure 4. Pigmeat: Major importers

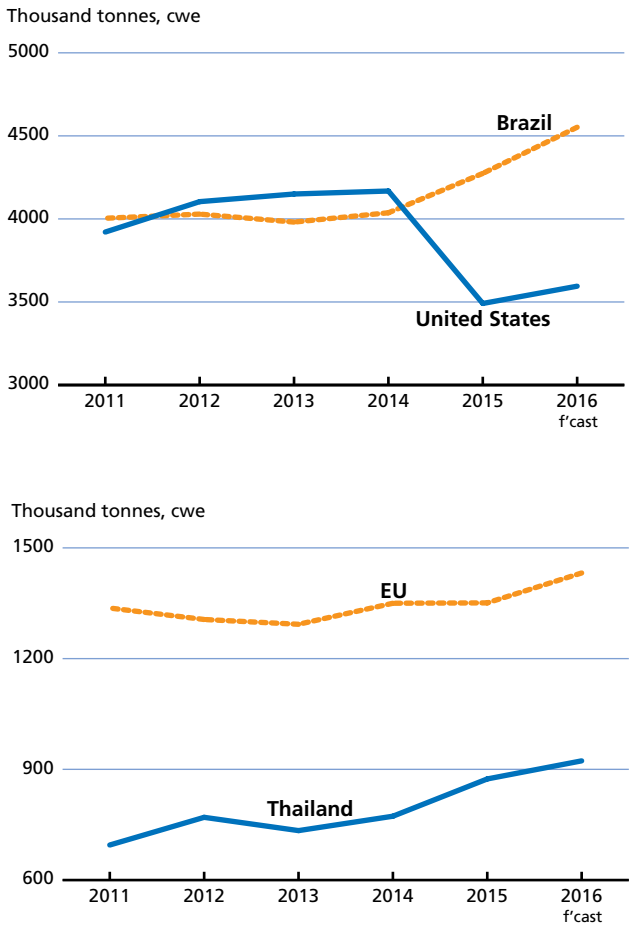


POULTRY MEAT

Production: modest expansion

Modest growth is foreseen for poultry meat production in 2016, with global output forecast to rise by 0.9 percent to 115.8 million tonnes. Substantial expansion is anticipated in the **United States** and **Brazil**, as well as increased production in the **European Union**, **India, Mexico** and **Argentina** – along with most other countries. Rising consumer demand and favourable feed costs have provided the basis for increased production. At the same time, output in **China** may experience a reduction of around 5 percent, because of lacklustre consumer demand, and may also fall in **South Africa**, where the domestic poultry industry has faced increased competition from imports. Production of poultry meat in the **Russian Federation** and **Turkey** is foreseen to be little changed, as subdued domestic demand, reduced profitability and limited export possibilities combine to restrain industry expansion.

Figure 5. Poultry meat exports: Brazil confirms its lead



Trade: recovery

Trade in poultry meat in 2016 is forecast to grow by 4.4 percent to 12.7 million tonnes. Buoyant international demand contributed to higher prices for poultry meat, registering an overall increase of 14.2 percent for the year to September, although it remains the lowest priced category of meat in the FAO Price Index. Affordability and rising domestic consumption have been important factors in stimulating imports in a number of markets, including **South Africa, Japan** and **Iraq.** The same factors should stimulate increased imports in by the **European Union**, the **Philippines**, the **United Arab Emirates**, **China**, **Mexico**, **Chile** and **Saudi Arabia**. In **Viet Nam**, growth in the domestic poultry industry and falling domestic prices may curb the country's imports. Likewise, purchases by the **Russian Federation** are expected to be constrained by the expansion of domestic production, but also by the continuation of the country-specific trade embargo. Reduced imports are also projected for **Angola**, **Benin**, **Canada** and **Cuba**.

Brazil is forecast to be the major beneficiary of increased international demand for poultry meat, with its trade forecast to expand by 6.5 percent to a record 4.6 million tonnes. Half-year shipments from Brazil showed a substantial rise in sales to China, which jumped by over 40 percent year-on-year, as well as to Egypt, Iraq, Japan and the United Arab Emirates, among others. **United States**'s exports are also set to recover somewhat, rising by 3 percent to 3.6 million tonnes, notwithstanding the continuation of the Russian Federation's embargo and, more importantly, trade restrictions related to the *highly pathogenic avian influenza virus* (HPAI), widely applied in 2015 and prolonged by several countries into 2016 (as of September). Export growth is also projected for the **European Union**, **Thailand** and **Ukraine**. Elsewhere, shipments by **Turkey**, **Argentina** and **China** may decline.

OVINE MEAT

Production: continued modest growth

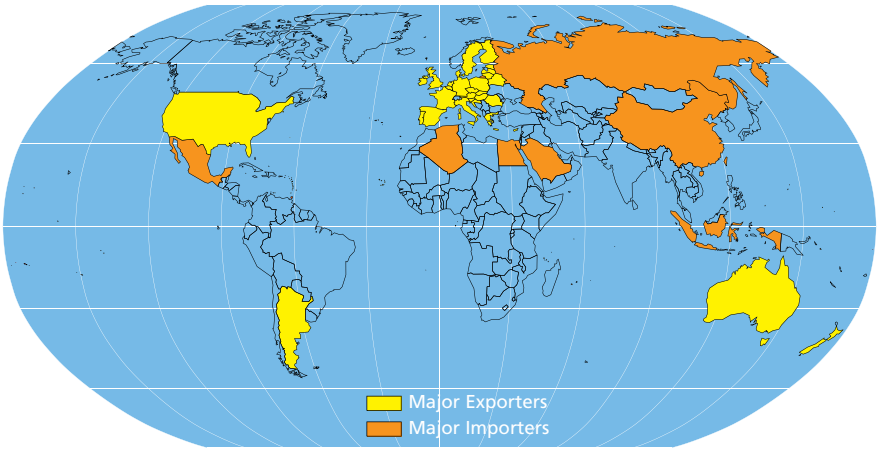
Production of ovine meat has grown little in the last few years, a trend likely to continue in 2016, with output forecast to increase by 0.6 percent to 14.1 million tonnes. Developing countries account for over 80 percent of the total, with the largest producers in this grouping being **China**, **India**, **Nigeria** and **Pakistan**. Generally satisfactory pasture conditions have set the basis for some output expansion in many of the major producing areas. In the **European Union**, herd expansion could boost sheep meat production by 2.1 percent in 2016. Meanwhile, in *Oceania*, dry weather and drought-imposed

herd reduction, and subsequent rebuilding, are projected to constrain output in **Australia** and **New Zealand**.

World trade in ovine meat is forecast to contract by 2.8 percent in 2016, to 937 000 tonnes, principally reflecting reduced shipments by **New Zealand** and **Australia.** New Zealand is projected to record a 5 percent fall in exports, while Australia could experience a 1.8 percent drop. Limited world export availabilities are forecast to result in a second year of reduced import flows into **China**, the main market for ovine meat, although some other destinations may register some increase, including the **United Arab Emirates**, the **United States**, **Malaysia** and the **European Union**.

MILK AND MILK PRODUCTS

Major Dairy Exporters and Importers



PRICES

International prices rise on anticipated tight supply

After falling almost continually since the beginning of 2014, international dairy prices surged mid-year, as the initiation of a declining trend in EU milk output and an unexceptional opening to the dairy year in Oceania pointed to tighter export supply prospects than had been anticipated.

The **FAO Dairy Price Index** averaged 176 points in September, up 21.4 points (13.8 percent) from August. International prices rose for all the dairy commodities that compose the Index, particularly for cheese, whole milk powder (WMP) and butter. Skimmed milk powder (SMP) quotations were muted, as large EU intervention stocks were seen as a potential future source of supply. Compared with September 2015, the Index averaged 33.7 points higher (23.7 percent), all constituent commodities rose, viz: WMP by 31.8 percent to 2 831, SMP by 22.3 percent to 2 248, butter by 36.2 percent to 3 926 and cheese by 16.8 percent to 3 504 per tonne.

PRODUCTION

Most growth to come from Asia

World milk production is forecast to grow by 1.1 percent in 2016 to 817 million tonnes. Output is set to expand in *Asia* and *North* and *Central America*, but stagnate in *Europe*

Figure 1. International prices surge mid-year

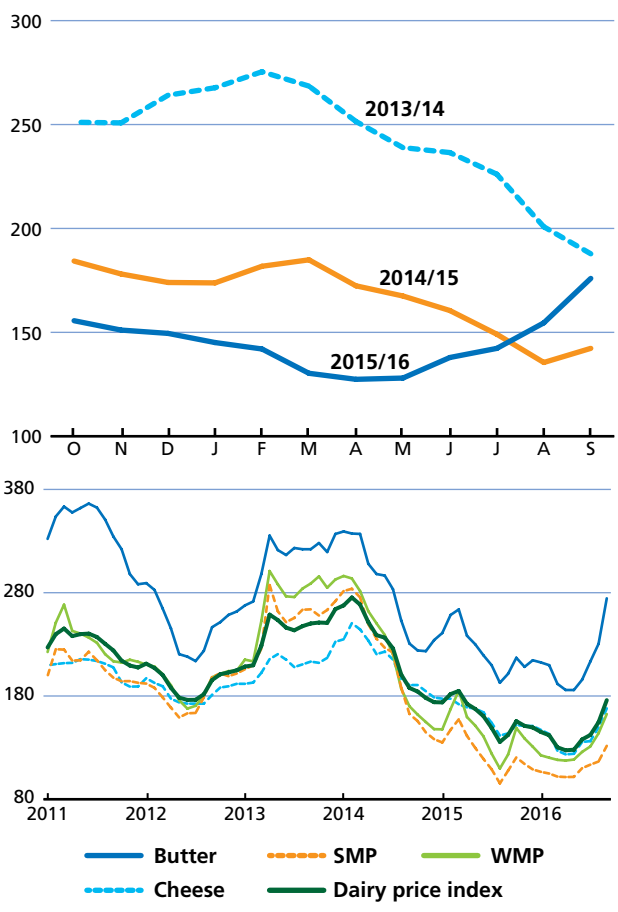


Table 1. World dairy market at a glance

	2014	2015 estim.	2016 f'cast	Change: 2016 over 2015
	million tonnes, milk equiv.			%
WORLD BALANCE				
Total milk production	**793.7**	**808.7**	**817.2**	**1.1**
Total trade	**72.0**	**72.1**	**72.3**	**0.4**
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	109.2	110.0	109.9	-0.1
Trade - share of prod. (%)	*9.1*	*8.9*	*8.9*	*-0.7*

FAO DAIRY PRICE INDEX (2002-2004=100)	2014	2015	2016 Jan-Sept	Change: Jan-Sep 2016 over Jan-Sep 2015 %
	224	160	143	-12.5

and *Africa* and decline in *Oceania* and *South America*. Most of the global increase would originate in *Asia,* principally **India,** where production is forecast to expand by 4.8 percent, or 7.3 million tonnes, to 160.4 million tonnes. In India, rising incomes and urbanization are fuelling demand, although the small size and limited productivity of the herd and urban encroachment constitute challenges to the industry. Increased output is also anticipated in **Pakistan**, **China** and **Turkey**. Elsewhere in *Asia*, the **Islamic Republic** of **Iran** and **Saudi Arabia** may achieve production levels slightly above last year. In **China**, where output is expected to recover somewhat after stagnating last year, more emphasis is being placed on developing large farms and improving genetics, while low farmgate prices have led some smaller scale producers to leave the industry. In **Japan** and the **Republic of Korea,** poor profitability is likely to lead to a continued exodus from the sector. In *Africa*, **Burundi**, **Kenya**, **Rwanda**, **Tanzania** and **Uganda** received abundant rain that led to pasture recovery and replenishment of water resources, auguring well for increased milk output in 2016. However, production is forecast to contract in a number of countries in southern Africa, including **South Africa**, **Malawi** and **Zimbabwe**, where *El Niño*-associated drought has affected animal condition and pastures, and where feed and fodder prices have spiralled. The *El Niño* weather anomaly brought exceptionally dry conditions to some parts in *Latin America and the Caribbean*, while others experienced excess rainfall and flooding. In *South America*, *El Niño* is anticipated to cause overall milk production to fall in the subregion. In **Brazil**, widespread dry conditions during the first part of the year adversely affected both milk output and pasture conditions. Moreover, a substantial rise in feed costs further impinged on profitability and contributed to industry exodus. As a consequence, Brazil's milk production may fall by as much as 5 percent in 2016. Meanwhile, in **Argentina** and **Uruguay**, milk output may drop by more than 10 percent, as their dairy industries were hit by heavy rain and flooding, with producers also having to deal with substantially higher feed costs and depressed international dairy product prices. In **Mexico**, improvements in genetics and technology would likely support a second year of growth in milk output, although competition from low-priced internationally sourced milk powder has tempered expansion.

In *North America*, output in the **United States** is forecast to rise by 2 percent to 96.3 million tonnes, continuing the expansion witnessed in the previous two years. Milk deliveries in **Canada** are set to remain at 8.7 million tonnes, within the limits established by its milk quota system.

In *Europe*, **EU** milk production is projected to expand by 1.3 percent to 165.7 million tonnes, sustained by strong growth at the start of the year, averaging 5.5 percent between January and April. Despite favourable pasture conditions, year-on-year EU monthly milk output began to fall back from May and is projected to decline during the second half of the year. Reduced farmgate prices in almost all member countries, which on average fell by 14 percent during the first-half of the year, have stemmed production growth. Preliminary data indicate that farmers in many EU countries increased the cow cull rate, as one means of moderating output. In an effort to raise prices, the EU substantially expanded intervention purchases and aid to private storage, especially for SMP. In addition, a series of

Figure 2. EU intervention and export prices

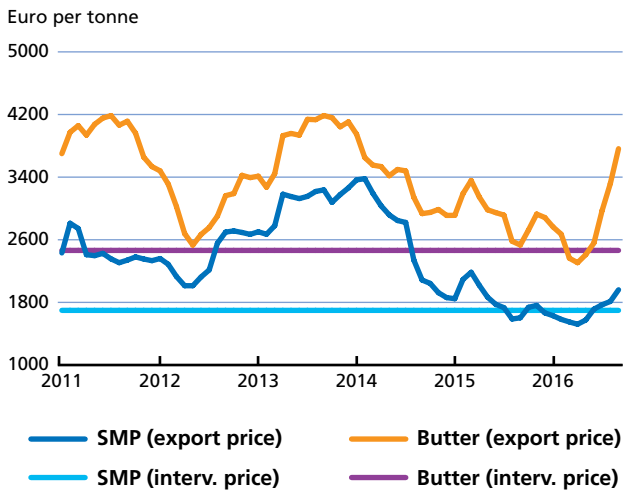


Figure 3. General alignment of feed and dairy price movement

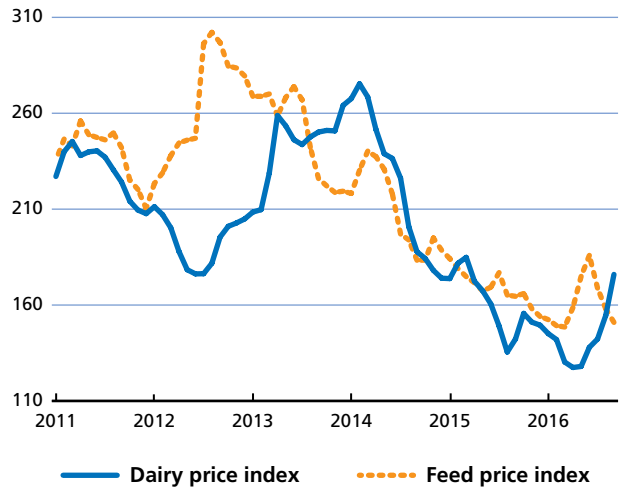


Table 2. Trade in dairy products: Principal exporting countries

	Average 2012-14	*2015 prelim.*	*2016 f'cast*	*Change 2016 over 2015*
	thousand tonnes (product weight)			*%*
WHOLE MILK POWDER				
World	**2 486**	**2 561**	**2 518**	**-1.7**
New Zealand	1 326	1 380	1 350	-2.2
European Union*	383	392	395	0.9
Argentina	176	138	128	-7.4
Uruguay	65	97	117	20.1
SKIM MILK POWDER				
World	**1 952**	**2 215**	**2 177**	**-1.7**
European Union*	524	684	645	-5.7
United States	518	560	544	-2.8
New Zealand	388	411	440	7.0
Australia	150	201	188	-6.0
BUTTER				
World	**933**	**950**	**1 006**	**5.8**
New Zealand	478	500	515	3.0
European Union*	134	185	230	24.0
Belarus	73	88	94	7.0
Australia	49	34	32	-5.0
United States	72	26	25	-2.0
CHEESE				
World	**2 376**	**2 379**	**2 477**	**4.1**
European Union*	758	719	795	10.6
New Zealand	287	327	350	7.1
United States	317	318	275	-13.5
Belarus	147	178	205	15.4
Australia	159	171	172	0.7
Saudi Arabia	125	126	130	3.4

* Excluding trade between the EU member countries. From 2013: EU-28

exceptional market measures and financial and promotion support were approved, including the possibility of voluntary agreements between farmers to limit milk deliveries for a six-month period, beginning 13 April 2016. Milk production in the **Russian Federation** is predicted to fall by 1.5 percent this year. Poor profitability has caused a contraction in the country's dairy herd, especially in the small farm sector, although this had been offset to some degree by productivity increases in the commercial farm sector. In neighbouring **Belarus**, milk production is expected to be stimulated by growing sales to the Russian Federation.

In *Oceania*, **New Zealand**'s dependence on the export market has left it particularly exposed to low international dairy product prices. This situation has acted as a disincentive for farmers to raise output via herd expansion or feeding supplements. New Zealand's milk production for the 2015/16 dairy year decreased 1.6 percent to 21.6 million tonnes, as farmers culled less productive cows. Should it persist, the recent upward shift in international dairy product prices would take some time to filter through to production. Therefore, for the moment, New Zealand's 2016/17 output is posited as unchanged. In **Australia**, reduced farmgate returns for milk and favourable prices for culled cows curbed 2015/2016 production by 1.4 percent to 10.3 million tonnes. Continuation of the same factors during the 2016/2017 dairy year, combined with prevalent dry conditions in the major dairy producing regions during the first half of the calendar year, is anticipated to further constrain production.

TRADE

Stable overall

Global trade in dairy products is projected to be almost unchanged in 2016, remaining at 72.3 million tonnes of milk equivalent. The absence of growth this year stands in marked contrast to an average annual rate of increase of 6 percent for period 2009–2014. In 2015, a drop in shipments to China and the embargo by the Russian Federation on imports from specific countries impinged on international demand. For 2016, imports by **China** and, to a lesser extent, the **Russian Federation** are projected to recover somewhat, with growth also foreseen for **Brazil**, the **United States**, and **Mexico**. However, this is forecast to be largely counterbalanced by substantial falls in purchases by **Venezuela** and **Algeria**, with declines also likely for the **United Arab Emirates**, **Nigeria**, **Singapore**, **Malaysia**, **Vietnam** and **Thailand**, among others. Within the overall international market for dairy products, trade flows in cheese and butter are anticipated to expand, while shipments of milk powders are projected to wane.

The **EU**, **New Zealand** and **Belarus** are the principal exporting countries expected to see sales rise. Meanwhile, falls in shipments by the **United States**, **Brazil** and **Argentina** would largely counterbalance increases elsewhere. In the case of the EU, large purchases of SMP to intervention stocks for the year so far are forecast to dampen trade growth, with total exports possibly rising by 2.1 percent, compared with increases of 13 and 6 percent in 2014 and 2015, respectively. On the other hand, sales by Belarus are projected to record a second year of growth due to a rise in trade with the Russian Federation. Despite rising milk production, overall dairy sales by the United States are expected to fall by as much as 4 percent due to the strength of the US dollar and increased international competition limiting export opportunities. In Brazil, drought-reduced milk output is forecast to curtail exports.

Whole milk powder – second year of decline

World trade in WMP is projected to decline for the second consecutive year in 2016, by 1.7 percent to 2 518 000 tonnes. Imports by **Venezuela** and **Nigeria** may fall sharply, with reductions also foreseen for **Algeria**, the **United Arab Emirates, Viet Nam** and **Malaysia**, although deliveries to **China** and **Brazil** are anticipated to substantially increase. A recovery in demand by China could push its imports to 540 000 tonnes, almost 20 percent up on 2015, while difficulty in financing imports may curtail Venezuela's purchases by as much as 40 percent and those of Nigeria by one third.

Among the main exporting countries, January/July data for **New Zealand**, which accounts for just over half of world exports, showed total sales down 4 percent, despite a large increase in shipments to China. Since seeing its sales of WMP to China fall off sharply in 2015, and experiencing difficulty in disposing of excess supplies as a consequence, New Zealand has reoriented its product mix in order to be less dependent on a single product or market, raising output of cheese in particular. Elsewhere, a combination of reduced milk production in **Brazil** and **Argentina** and curtailed imports by Venezuela, the main market for WMP for both countries, is forecast to stem sales. In general, other principal exporters are expected to maintain levels of trade similar to last year. The outlook is more positive for Uruguay, which saw January/July exports leap by 70 percent, driven by increased sales to Brazil.

Skim milk powder – decline forecast

Trade in SMP is predicted to decrease in 2016, ceding 1.7 percent to 2 177 000 tonnes, which would bring a halt to an eight-year run of annual growth. The principal reason behind this change in trend stems from the temporary removal of supplies from the market via unusually large purchases to intervention stocks in the **EU**. The opening of EU intervention purchases of SMP at the start of the year, combined with storage financed under the Private Storage Aid scheme, meant that approximately 400 000 tonnes of product, equivalent to 25 percent of EU's production and to 60 percent of the level of its exports in 2015, were removed from the market during the first eight months of the year. The reduced pressure to dispose of excess supplies externally was instrumental in half-year EU SMP exports falling by 14 percent, year-on-year. Exports by the **United States** are also expected to be down. Meanwhile, **New Zealand**, which has placed greater emphasis on SMP production, could see overall sales rise, sustained by increased shipments to Southeast Asia.

Since 2014, global import demand for SMP has remained relatively stable. This situation is expected to continue in 2016,

Figure 4. WMP: Major exporters

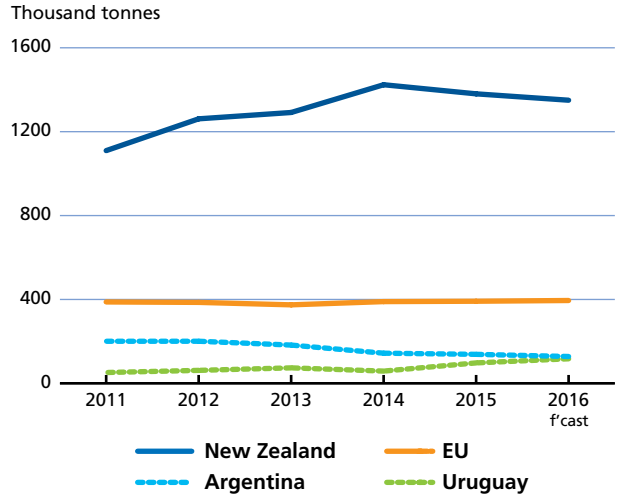
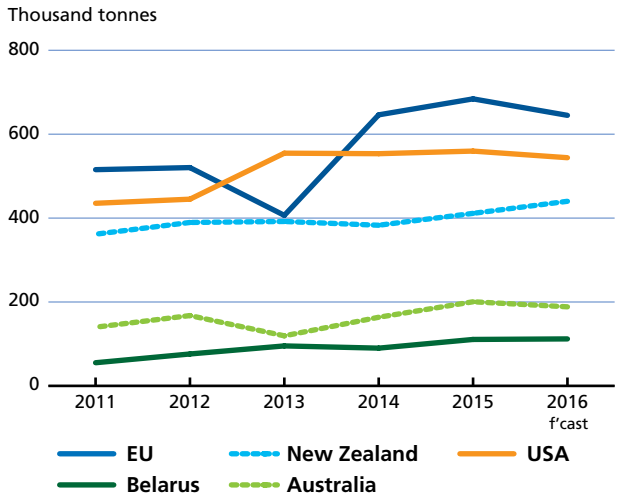


Figure 5. SMP: Major exporters



with many of the main importing countries maintaining similar levels of purchases to last year. Some growth in imports is expected for the **Philippines**, **Mexico, China** and the **Russian Federation**, while those of **Malaysia**, **Singapore, Thailand**, **Algeria** and **Japan** may be reduced somewhat.

Butter – trade rebounds

Trade in butter is forecast to rebound, after falling in 2015. Reflecting the strengthening of demand, international quotations for butter rose 44 percent between May and September. The main sources of augmented purchases are projected to be the **Russian Federation**, the **United States**, **China**, **Mexico**, **Australia** and **Saudi Arabia**, while those by the **United Arab Emirates**, **Singapore**, the **European Union** and **Egypt** may fall.

Among exporting countries, the **EU** is projected to benefit most from the rise in world demand. In the EU, both production growth and a favourable rate of exchange are likely to underpin a rise in external sales. Comparing the first six months of 2016 with the same period in 2015, EU's butter exports rose by 33 percent. In particular, sales to China grew, with deliveries to the Middle East, North Africa and North America also strong. Elsewhere, the other principal exporting countries are expected to see sales comparable with last year. In the case of **New Zealand**, shipments of butter are likely to stay around the 515 000 tonnes mark. The first seven months of the year saw New Zealand's sales to the Islamic Republic of Iran and Mexico rise substantially, while those to the United Arab Emirates, Azerbaijan and the United States fell.

Cheese - strong growth

Trade in cheese is forecast to increase by 4.1 percent to 2 477 000 tonnes, ending five years of limited-to-negative growth. The principal countries anticipated to import more are the **Russian Federation**, **China** and the **United States**. Among the major exporters, increased shipments are forecast for the **EU**, **Belarus**, **New Zealand** and **Argentina**, with sales by **Saudi Arabia**, **Australia**, **Nicaragua** and the **Islamic Republic of Iran** being little changed and those of the **United States** and **Egypt** falling. Exports by the EU could rise by as much as 10 percent to almost 800 000 tonnes, which would represent both a record and the first annual increase since the Russian Federation embargo was imposed in 2014. Because of the prior importance of the Russian Federation, which absorbed a third of EU exports before the ban was introduced, the EU has had to focus on other markets – mainly the United States, Japan, the Republic of Korea, Saudi Arabia, Egypt and Algeria. Meanwhile, as the pre-2014 traditional suppliers continue to be subject to the embargo, Belarus still has considerable opportunities for export to the Russian Federation and, consequently, its shipments are projected to rise by 15 percent in 2016, to reach 205 000 tonnes. The sharp fall in WMP imports by China in 2015 caused New Zealand to focus more on cheese as an alternative use for milk. As a consequence, its cheese exports rose by 18 percent in 2015 and further growth is anticipated in 2016, with shipments forecast to reach 350 000 tonnes. New Zealand's sales of cheese have expanded in particular to China, the United States, Australia and the EU. In the United States, continued strong domestic demand for dairy products in general, a strong US Dollar and increased competition from other suppliers are anticipated to lead to a second year of diminished cheese exports, which could fall by a similar margin as in 2015, or almost 15 percent, to 275 000 tonnes.

Figure 6. Butter exports: EU major markets

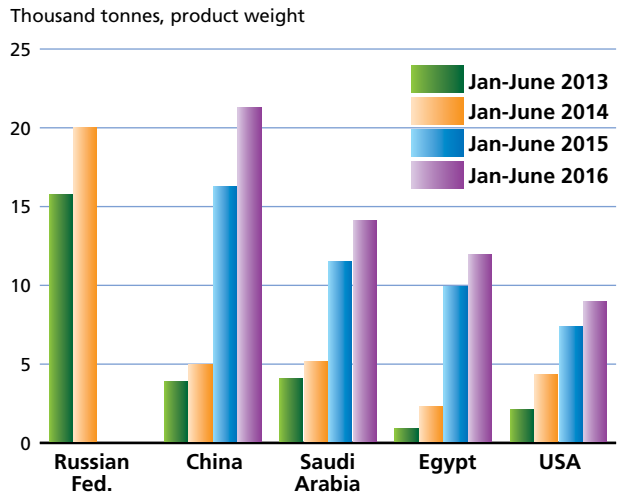
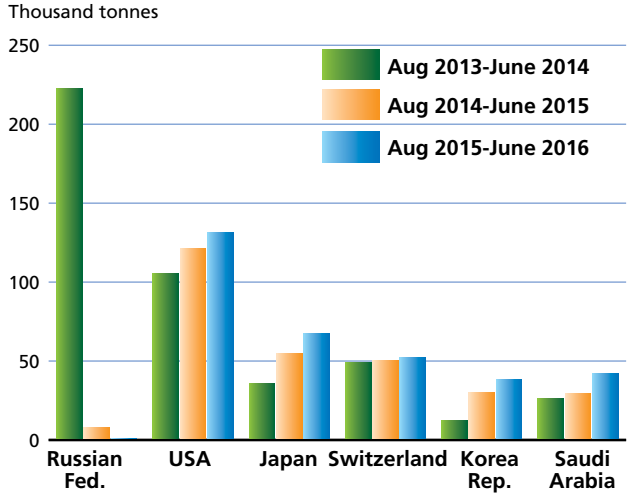
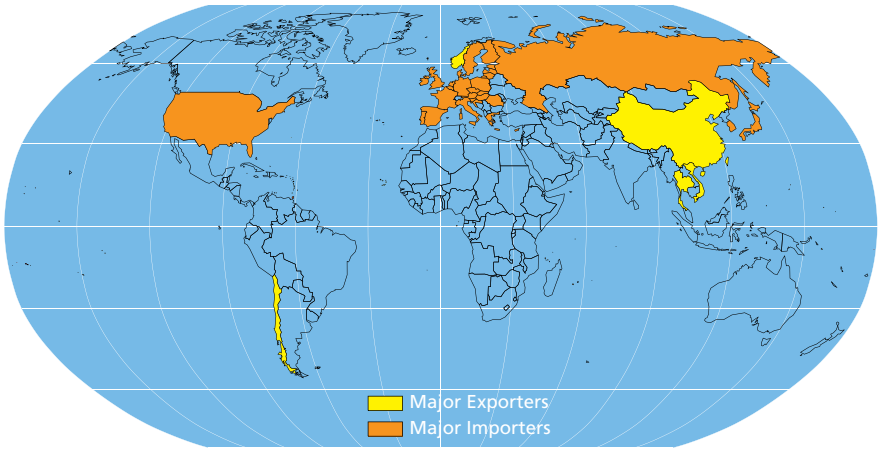


Figure 7. Cheese exports: EU major markets



FISH AND FISHERY PRODUCTS

Major Exporters and Importers of Fish and Fishery Products



GLOBAL FISH ECONOMY

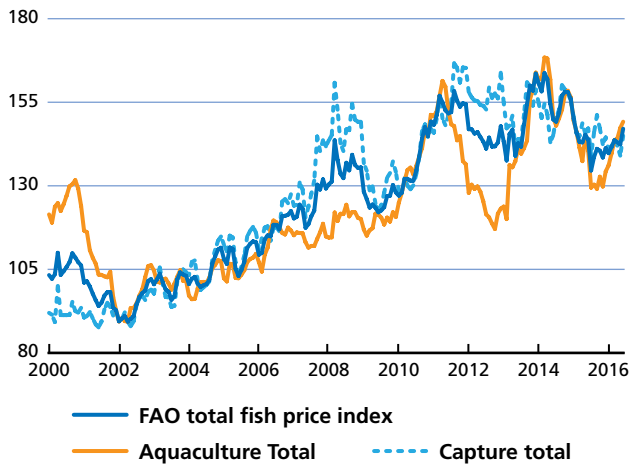
Global fish production in 2016 is forecast to expand by 1.8 percent, to 174.1 million tonnes, well below the ten year-trend of 2.3 percent. The relatively modest world growth reflects a number of setbacks, including diseases, and regulatory constraints. Under current expectations, the increase in global seafood production would stem from a 5 percent expansion of aquaculture to 81.4 million tonnes, confirming the sector as the main engine for fishery growth, which would compensate for a 0.9 percent contraction in wild fish output to 92.7 million tonnes.

Across different species, shrimp production continues on a downward trend in some major Asian producing countries, constrained by a recurrence of parasites, bacterial, fungal and viral diseases. Nonetheless, the world production outlook for 2016 is positive overall, thanks to gains in Ecuador, Indonesia and Thailand. Fresh cod faces an upward price trend, and Asian developing countries are expanding their role of important global whitefish processors. Tuna supply is facing constraints associated with seasonal fishing bans and the imposition of import restrictions.

Developing countries continue to play a significant role in the international supply of fish. Among developed nations, Norway, one of the world's largest producers, continues to enjoy an increased positive performance due to upward trends of salmon and cod prices. Among the world's major importers, the US, the European Union and Japan are all expected to see marginal declines in total import value. The overall outlook for the value of seafood trade in 2016 continues to be positive, mainly thanks to rising price prospects.

After the sharp declines registered in the second half of 2015, international seafood prices have shown a tendency to recover over the first months of 2016, while still remaining below their corresponding levels in 2015. According to the FAO Fish Price Index, fish prices averaged 2 percent lower in the first six months of 2016 compared to

Figure 1. The FAO Fish Price Index (2002-2004=100)



Source: Norwegian Seafood Council (NSC)

Table 1. World fish market at a glance

	2014	2015 *estim.*	2016 *f'cast*	Change: 2016 over 2015
	million tonnes			%
WORLD BALANCE				
Production	**167.2**	**171.0**	**174.1**	**1.8**
Capture fisheries	93.4	93.5	92.7	-0.9
Aquaculture	73.8	77.5	81.4	5.0
Trade value (exports USD billion)	**148.3**	**134.1**	**140.0**	**4.4**
Trade volume (live weight)	**60.0**	**59.9**	**60.0**	**0.2**
Total utilization	**167.2**	**171.0**	**174.1**	**1.8**
Food	146.3	149.4	152.8	2.3
Feed	15.8	16.5	16.2	-1.8
Other uses	5.1	5.1	5.1	0.0
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
Food fish (kg/yr)	20.1	20.3	20.5	1.1
From capture fisheries (kg/year)	10.0	9.8	9.6	-1.8
From aquaculture (kg/year)	10.1	10.5	10.9	3.9
FAO FISH PRICE INDEX (2002-2004=100)	**2014**	**2015**	**2016** *Jan-Feb*	**Change: Jan-Jun 2016 over Jan-Jun 2015 %**
	157	142	143	-1.6

Source: FAO Fish Price Index: Norwegian Seafood Council (NSC)
Totals may not match due to rounding.

the same period last year, reflecting a decline of 4 percent for captured fish, while prices of aquaculture products remained stable. Only salmon prices made substantial gains year-on-year, due to a combination of tight supplies in major exporting countries and sustained import demand. By contrast, the losses incurred in the second half of 2015 brought average prices down for the other fish species, in particular shrimps and pelagic fish. Since January, however, most seafood products have witnessed a firming of prices, including fish meal and fish oil, reflecting a significant reduction in the supply of anchoveta together with growing demands for animal and aquaculture feed.

Consumer demand for fish remains strong, with more people worldwide appreciating the health benefits of regular fish consumption. Direct human consumption, which accounts for more than 85 percent of all fish uses, is projected to grow by 2.3 percent to 152.8 million tonnes in 2016. This would result in a slight increase in per capita fish intake, from 20.3 kg in 2015 to 20.5 kg in 2016.

In July 2016, FAO, UNCTAD and UNEP issued a Joint-Statement highlighting the importance for countries and the international community to move forward on trade-related targets under Sustainable Development Goal (SDG) 14, particularly under a specific target, SDG 14.6, which deals with fisheries subsidies. More than 90 countries, international governmental organizations, and active civil society organizations endorsed this Joint-Statement. In this regard, a future international regulatory framework implemented for fisheries subsidies will have a significant market-oriented impact on production patterns, prices and trade flows.

SHRIMP

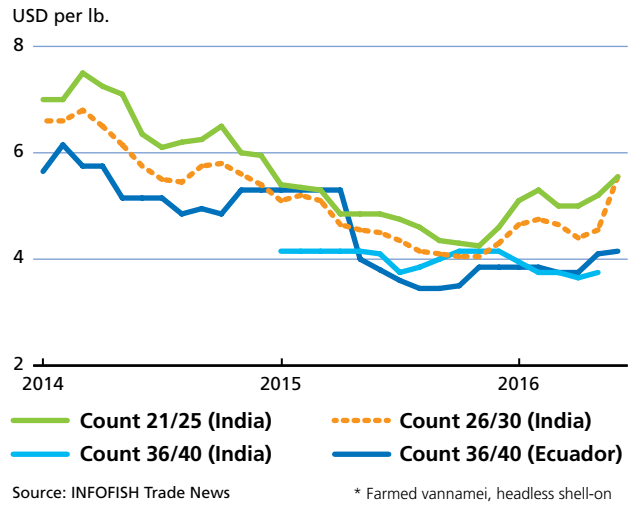
Production of farmed shrimps in Asia remains relatively weak for some producers in 2016, due to an ongoing disease problem in China and the effects of drought and a delayed monsoon in some parts of Southeast Asia. Thailand, however, is ramping up production after suffering severely from disease outbreaks in recent years, and it expects strong production of 270 000 to 300 000 metric tonnes for 2016. Ecuador and Indonesia are also expecting to show strong volume growth rates for 2016 and 2017. The net result of global production is estimated to be positive for 2016

Table 2. Japanese imports of shrimp (by product)

	2011	2012	2013	2014	2015	2016
	Jan-Mar (thousand tonnes)					
Frozen, raw	43.1	42.4	38.5	36.4	27.6	32.3
Cooked, frozen	4.8	5.1	5.2	4.5	3.6	4.0
Prepared/preserved*	11.4	11.6	11.3	8.8	8.2	7.9
Sushi (with rice)	0.7	0.5	0.6	0.4	0.5	0.5
Total*	**60.8**	**60.3**	**56.1**	**50.7**	**40.1**	**45.1**

(*Including other)
Source: Japan Ministry of Finance /INFOFISH

Figure 2. Ex-warehouse prices of shrimp in New York, USA*



Source: INFOFISH Trade News
* Farmed vannamei, headless shell-on

and 2017, but increased regional demand, particularly from China, is absorbing supplies previously channelled to traditional developed markets. Overall, China will likely continue to influence the global market and international prices if its domestic production does not improve. In the near term, the market will also be determined by the supply situation in India, where the 2016 production forecast is not promising. However, on a global scale, the direction of future price trends largely depends on the extent to which demand growth in regional markets in Asia offsets global supply increases.

TUNA

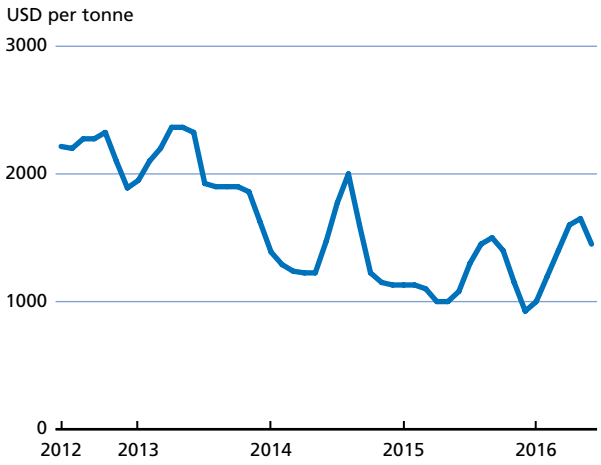
Canned tuna production in Ecuador, the largest supplier to the European market, was lower in May following a mid-April earthquake that slowed cannery operations and impacted the port infrastructure at Manta, making it impossible to land raw material. Combined with a scarcity of tuna arrivals from the Eastern Pacific, this situation pushed prices upwards in early 2016, but they have since stabilized. Starting from 1 July, purse seine operations in the Western and Central Pacific were subjected to the seasonal three-month ban on fish aggregating devices (FADs), which, combined with positive demand for tuna from processors, is likely to keep prices stable or lead to further increases for the remainder of 2016. The most significant trade-related news for the tuna sector in the future is the European Commission's formal notice (yellow card) issued to Thailand in April 2016 for not taking sufficient measures in the international fight against IUU fishing. In April, the EU stated that it had given Thailand six months to implement a corrective action plan. Should the situation not improve, the EU could resort to banning fisheries imports from Thailand. Last year, the EU imported USD 184 million worth of canned tuna from the country, so if the ban goes into effect, there could be serious repercussions to Thailand, but also the EU, which would have to seek new sources of supply.

Table 3. Thai exports of canned/processed tuna

	2012	2013	2014	2015	2016
	Jan-Jun (thousand tonnes)				
USA	46.3	54.9	52.4	41.0	44.5
Egypt	27.1	15.7	19.6	31.9	37.8
Australia	19.5	20.0	21.8	20.5	19.2
Japan	16.4	17.2	16.0	16.9	17.1
Canada	15.0	16.4	15.2	13.9	14.9
Saudi Arabia	15.4	11.9	14.6	16.8	14.0
Libya	20.7	17.7	22.3	12.4	8.6
UAE	6.3	6.5	6.4	7.7	8.2
Argentina	3.4	3.6	2.8	3.3	6.7
UK	5.2	8.5	5.9	6.8	6.3
Peru	0.7	2.3	4.0	5.6	5.3
Chile	2.9	5.1	7.6	5.4	5.1
Jordan	2.2	3.0	5.4	3.6	5.1
Israel	1.3	2.5	4.1	4.3	5.0
PN Guinea	4.4	3.1	5.9	5.6	4.2
Lebanon	2.5	2.4	2.7	2.2	3.4
Yemen	5.6	5.4	4.4	3.5	3.1
Tunesia	6.4	5.9	3.4	1.6	3.1
Others	66.5	79.9	79.7	78.0	59.7
Total	**267.8**	**282.0**	**294.2**	**281.0**	**271.3**

Source: Thai Customs

Figure 3. Prices of frozen skipjack tuna for canning in Thailand*



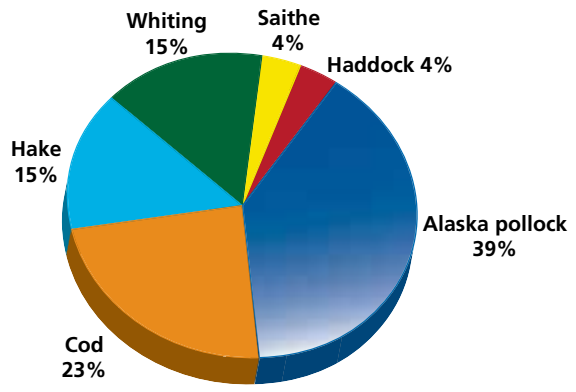
Source: INFOFISH Trade News

* (4 lb./pc and up, CFR Bangkok, origin: Western Pacific)

GROUNDFISH

For the remainder of 2016, a stable supply situation is expected for the majority of groundfish species. Relatively high prices for cod are forecast to continue, while haddock prices are giving sign of recovering. Cuts in Barents Sea quotas for both species have been recommended by the International Council for the Exploration of the Sea (ICES) in 2017, which may result in tighter supplies and firmer prices. Pacific cod quotations are also on the rise, and can be expected to benefit from the same market conditions. Meanwhile, the Barents Sea saithe quota is likely to be raised next year. As for surimi, the processed paste made from fish, including cod and haddock, and transformed into an imitation of crab pulp, there is a danger of overproduction, particularly considering the long-term trend that is seeing consumers move away from processed seafood. Sustainability remains an important concern for the groundfish sector, with an increasing number of fisheries in the US and Europe seeking certification by the Marine Stewardship Council (MSC).

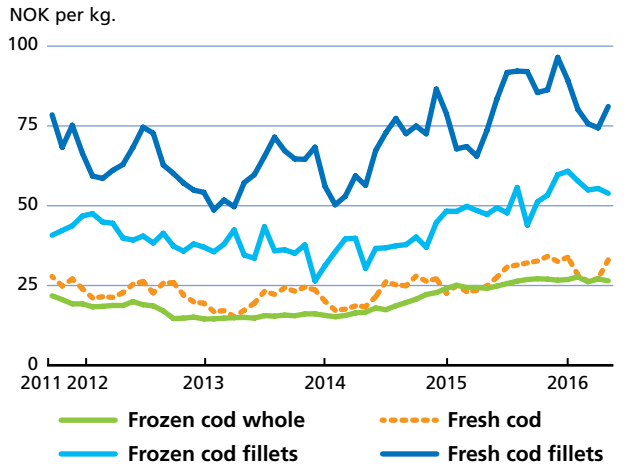
Figure 4. Groundfish production* by main species (2014)



Source: FAO

* Aquaculture+ capture

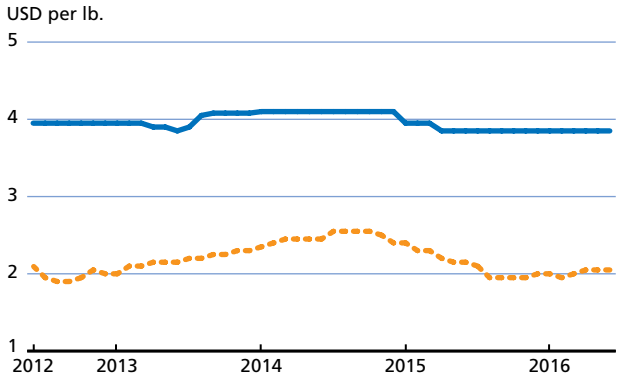
Figure 5. Export prices of cod in Norway*



Source: Norway Seafood Council

* Average export prices, FOB Norway

Figure 6. Prices of tilapia in the USA



Source: INFOFISH Trade News

CEPHALOPODS

The 2016 squid season off South America has been a significant disappointment for the sector thus far. Landings are dramatically down, with the drop generally attributed to the strong El Niño in 2015 and 2016. Catches have been so poor that the authorities are considering at least partial reimbursement of licence fees. As a result of the tightening supply, squid prices are up by more than 30 percent. In contrast, there seems to be reason for a more optimistic view of cephalopod supply in the longer term, as recent research has shown that global cephalopod populations are growing. In the more immediate future, scientists are expecting the current El Niño to taper off and temperature conditions to return to normal in the next 6 to 12 months, which should bring about an improvement in landings in the affected regions over the next year. Squid prices, however, can be expected to remain high for some time with sustained strong demand, while the need to make up a shortfall in supplies of *Illex* and *Loligo* squid may stimulate demand for alternative species.

PANGASIUS

The current low international prices of pangasius will continue to encourage imports throughout 2016, particularly in the important US market. For the world's number one producer, Viet Nam, lower prices have led the Viet Nam Association of Seafood Exporters and Producers (VASEP) to forecast a 5 percent reduction in total export value for 2016. Growing import demand for farmed pangasius is expected to support growth in producing countries other than Viet Nam and prevent prices from dropping further. In fact, it is likely that increasing feed costs will necessitate a price hike in the medium term.

Table 4. US imports of fresh and frozen pangasius fillets

	2012	2013	2014	2015	2016
	Jan-June (thousand tonnes)				
Viet Nam	47.2	48.9	45.1	54.8	64.3
China	2.4	3.6	4.2	3.3	2.5
Thailand	0.0	0.0	0.0	0.0	0.0
Others	0.1	0.0	0.0	0.1	0.3
Total	**49.7**	**52.5**	**49.3**	**58.2**	**67.1**

Source: NMFS

TILAPIA

Despite the weakening of major markets such as the US and production problems in China, the outlook for

Table 5. US imports of tilapia (by product and origin)

	2012	2013	2014	2015	2016
	Jan-Jun (thousand tonnes)				
Fresh fillets					
Honduras	2.5	3.8	5.3	4.8	4.9
Colombia	1.2	1.9	1.9	2.5	2.6
Costa Rica	1.2	3.5	2.9	2.6	2.5
Ecuador	3.3	3.2	1.4	1.4	1.2
Others	0.3	1.7	2.0	2.1	1.9
Total	8.5	14.1	13.5	13.4	13.1
Whole frozen					
China	12.4	10.8	9.5	12.3	12.4
Taiwan Province of China	5.1	7.5	5.6	4.9	5.9
Thailand	0.2	0.2	0.3	0.5	0.3
Others	0.3	0.5	0.6	2.0	0.9
Total	18.0	19.0	16.0	19.7	19.5
Frozen fillets					
China	71.3	56.5	64.8	70.0	59.9
Indonesia	6.4	5.4	5.4	4.9	4.0
Taiwan Province of China	0.8	0.7	0.5	0.6	0.8
Thailand	1.1	0.5	0.8	0.6	0.5
Ecuador	0.4	0.4	0.0	0.0	0.0
Others	0.8	0.4	0.9	1.8	2.0
Total	**80.8**	**63.9**	**72.4**	**77.9**	**67.2**
Whole frozen	18.0	19.0	16.0	19.7	19.5
Frozen fillets	80.8	63.9	72.4	77.9	67.2
Fresh fillets	8.5	14.1	13.5	13.4	13.1
Total	**107.3**	**97.0**	**101.9**	**111.0**	**99.8**

Source: NMFS

the world's farmed tilapia industry remains promising as demand is strong and growing in a range of markets in Asia, Africa and Latin America and the Caribbean. Prices of Chinese tilapia are expected to start rising again on the back of supply shortages, and a number of countries are looking to significantly expand their tilapia farming industries. In particular, the Indian and Brazilian sectors are set to receive heavy investment from both government and private sources, which may boost global supply in the long term.

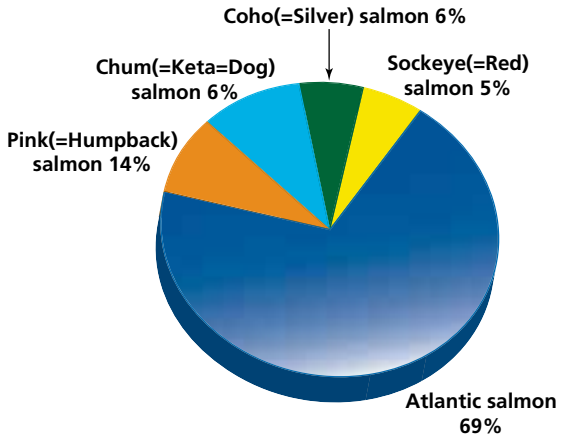
SEABASS AND SEABREAM

The current outlook for the farmed bass and bream sector can be best described as cautiously positive, so long as prices are maintained at economically sustainable levels. This will depend on the rate of production volume growth, and the progress made towards cost reductions at the farm level. Consolidation and investment activities are ongoing in major producing countries of the Mediterranean such as Greece and Turkey, which will allow for achieving improved competitiveness through economies of scale. Prices for both bass and bream did not quite reach the mid-summer peaks achieved last year in major European markets and are expected to decline steadily in typical fashion as seasonal demand weakens towards the end of the year.

SALMON

The global salmon market, from producer to consumer, has to now come to terms with a new, higher price plateau. After months of upward revisions, forward prices for Norwegian farmed salmon are now set to remain above USD 6 per kg until 2019. For the remainder of 2016, the drop in prices following the traditional late summer harvest in Norway is expected to reverse significantly, moving above last year's levels as year-end demand takes effect. In the longer-term, Norwegian farmers will continue to reap the benefits of physical and regulatory limits on supply. Despite the obvious price benefits of slower and regulated production growth in Chile, the business implications of new regulations on its industry lead to additional costs associated with the regulations' sanitary requirements. The process of regulatory change is still effectively ongoing

Figure 7. Salmon production* (farmed and wild) by species (2014)



Source: FAO

* Aquaculture + capture

Table 6. Norwegian exports of salmon and trout (value terms)

	2012	2013	2014	2015*	2016*
	Jan-Jun (billion NOK)				
Salmon	**13.9**	**17.3**	**21.3**	**21.8**	**27.9**
Fresh	10.7	14.0	17.0	17.1	22.2
Frozen	0.6	0.4	0.6	0.6	0.5
Fresh fillet	1.4	1.7	2.2	2.4	3.4
Froz. Fillet	1.1	1.1	1.5	1.6	1.7
Trout	**0.8**	**1.0**	**1.2**	**0.8**	**1.8**

Source: Norwegian Seafood Council

in Chile, and certain industry representatives are looking to have the 3 percent annual production growth limit revisited. In the wild salmon sector, with Alaskan harvests exceptionally high this year in contrast to the overall supply situation, the current market conditions may be seen as an opportunity, particularly if product innovation and improved quality control can more closely integrate the wild and farmed fish markets.

SMALL PELAGICS

Supplies of the main small pelagic species, such as mackerel and herring, will be somewhat tighter this year, and prices are generally high. The absence of the Russian market for those exporting countries subject to the trade ban, e.g. Norway and Iceland, is still presenting some difficulties, but strong demand from elsewhere is underpinning sales for key species such as herring and mackerel. In Nigeria, traditionally an important market for small pelagic exporters, the decision of the Nigerian Central Bank (CBM) to float the national currency against the US dollar is expected to stabilize the currency in the long run. As a result, industry players are optimistic about future development of the market after a lull following the structured trade embargo introduced in 2014. In South America, meanwhile, supplies of anchoveta will be considerably lower due to ongoing El Niño effects while, in the west coast of North America, there will be no sardine fishing at all. Overall, the price outlook is positive for the major small pelagic species, although this will inevitably also depend on the development of currency exchange rates between key trading partners.

Table 7. Federation of Russian imports of whole frozen herring

	2012	2013	2014	2015*	2016*
	Jan-Jun (thousand tonnes)				
Faroe Islands	9.2	7.9	6.7	18.1	10.6
Norway	35.5	26.7	27.3	0.0	0.0
Finland	2.8	2.0	3.6	0.0	0.0
Iceland	2.3	0.5	2.9	3.3	0.0
Others	2.9	2.0	3.9	10.1	0.1
Total	**52.7**	**39.1**	**44.4**	**31.5**	**10.7**

Source: Federal Customs Service of Russia

Table 8. Federation of Russian imports of whole frozen mackerel

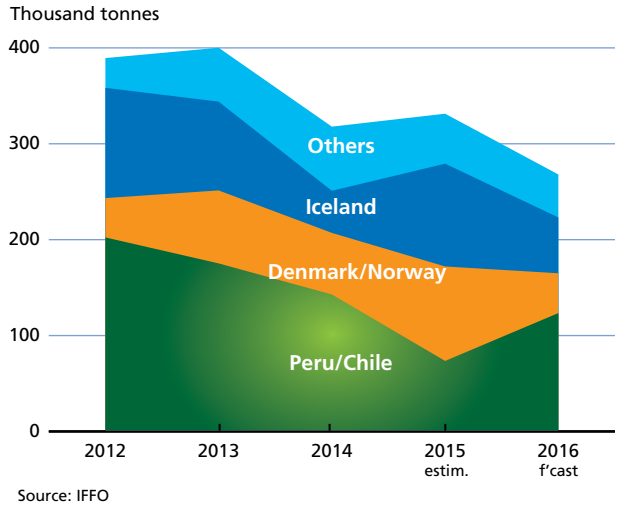
	2012	2013	2014	2015*	2016*
	Jan-Jun (thousand tonnes)				
Faroe Isl	0.0	3.9	2.4	11.1	24.6
China	1.9	0.4	0.7	0.4	3.0
Greenland	0.0	0.0	0.0	0.0	0.6
Morocco	1.3	1.3	1.4	0.9	0.5
Norway	12.1	7.4	4.5	0.0	0.0
UK	3.1	8.9	9.9	0.0	0.0
Others	7.0	15.7	15.3	7.8	0.9
Total	**25.4**	**37.6**	**34.2**	**20.2**	**29.6**

Source: Federal Customs Service of Russia

FISHMEAL AND FISH OIL

When Peru established a higher than expected – 1.8 million metric tonnes – anchoveta quota for the first fishing season in June 2016, the fishmeal and fish oil industry was optimistic that the supply of fishmeal from the southeastern Pacific would be adequate in the short-term, despite the disruptive impact of El Niño. However, the authorities ended the season sooner, at the beginning of August, to make way for the spawning season, with only 50 percent of the quota caught and the season's catch of 920,000 metric tonnes the lowest in a decade. This shortfall has inevitability pushed prices upwards once again, and fishmeal prices rose some 27 percent from June to August. Although commentators expect the situation to normalize later in the year, the persistent volatility of prices and an ever-increasing gap between demand from the global aquaculture and livestock sectors and fishery supply can be expected to continue to push prices upwards and drive the development of alternative sources of animal and fish feed.

Figure 8. Top global producers of fishmeal (January-March)



Source: IFFO

CRAB

The availability of crab on the US west coast has markedly increased this year, despite the reduced quotas in the Bering Sea, and average prices are up for both US and Russian suppliers. The favourable market situation has analysts predicting that 2016 will be a very profitable year for the crab industry. However, researchers have recently shown that legal male crab biomass in Alaskan fisheries have decreased for multiple species, which will likely have a negative effect on supply volumes in the long term.

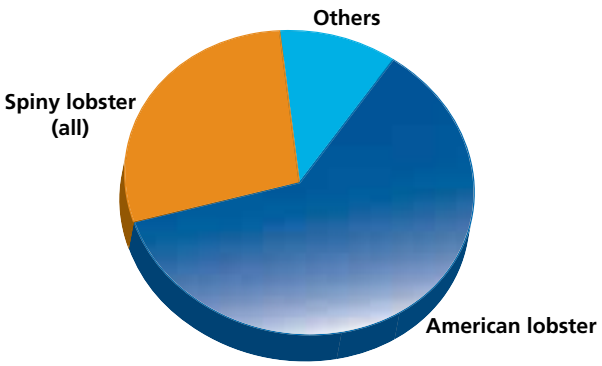
BIVALVES

The nature and extent of the consequences of the Brexit vote on the bivalve trade are difficult to assess at present, and the picture will only become clearer when the characteristics of the UK's future trade deals and regulatory changes are decided upon. However, given that the UK is both an important supplier and a key market for traded scallops, cockles, razor and clam shells, the impact on market dynamics is likely to be significant. Among other effects, the weakened British pound is boosting export-based bivalve businesses while making imports relatively more expensive. Other important market developments include an increased interest in organic mussels, with industry sustained development observed in Denmark and Ireland, and a signed agreement in early April on mutual recognition of organic production equivalence rules and control systems between the EU, Chile and Canada. Elsewhere, a new study published in the *Proceedings of the National Academy of Sciences* suggested that increasing sea temperatures may be heightening food safety risks in bivalves, specifically with regard to incidence of vibrio genus bacteria usually associated with undercooked seafood.

LOBSTER

Supplies of North American lobster were quite tight in the summer of 2016 as catches were low. Coupled with strong demand in the US and Canadian markets, the lack of volume has sent lobster prices soaring higher and has seen processors scrambling to secure raw material. Demand for North American lobster in Asia is also expected to continue to strengthen, in spite of the lull in the Chinese economy. Prices for live lobster generally weaken temporarily in autumn, but the outlook, in general, is very positive.

Figure 9. Lobster production* by species (2014)



Source: FAO

* Aquaculture + capture

SPECIAL FEATURES

NAIROBI DECISION ON EXPORT COMPETITION

(Tenth WTO Ministerial Conference, Nairobi, December 2015)

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ELIMINATION OF EXPORT SUBSIDIES UNDER THE LATEST WTO RULE WILL BE A CRITICAL FACTOR IN THE PERIOD OF LOW PRICES

Despite a general rise since the beginning of 2016, international food commodity prices have remained well below their peak values and are not projected to return to those high levels over the next decade (OECD/FAO 2016). In this context, the Decision[1] agreed at the 10th WTO Ministerial Conference, held in Nairobi in December 2015, to eliminate export subsidies can be important as it prevents members from reverting to their use.

Export subsidies, which were mostly used by OECD countries in the past, are considered a highly market-distorting instrument of agricultural support, with negative implications for trading partners and world markets. While providing incentives to domestic producers, export subsidies tend to supress world prices, by boosting supplies of exportable products, thus affecting the competitiveness of those countries that are not able to provide similar support. Historically, while agricultural export subsidies in developed countries could be said to have benefited net food-importing developing countries, they have placed a severe constraint on the ability of farmers in developing countries to compete in world and domestic markets. For these reasons, export subsidies have always been the core of the WTO negotiations on export competition.

Table 1. Food prices are generally up since the start of 2016

Food price indices	January 2016	September 2016	Change: Sep 2016 over Jan 2016
			%
FAO Food Price Index	149	171	15
Cereals	149	141	-5
Oils	139	172	24
Sugar	199	305	53
Meat	145	164	13
Dairy	145	176	21

Source: FAO

Table 2. Food prices remain well below their peaks

Food price indices	Peak values		September 2016	Change: Sep 2016 over peak values
				%
FAO Food Price Index	Feb-11	240	171	-29
Cereals	Jun-08	268	141	-47
Oils	Feb-11	287	172	-40
Sugar	Jan-11	420	305	-27
Meat	Aug-14	212	164	-23
Dairy	Feb-14	275	176	-36

Source: FAO

NAIROBI DECISION ON EXPORT COMPETITION

The Nairobi WTO Ministerial Conference (MC10) reached a Decision on export competition covering all four elements of the agriculture negotiations on export competition, namely: export subsidies; export credits, guarantees & insurance programmes; agricultural exporting state trading enterprises (STEs); and international food aid. The agreement to eliminate export subsidies is the most significant element of the Decision, as this instrument has always been at the heart of the WTO negotiations due to its significant trade distorting character and its extensive use in the previous decades.

At the time of the Nairobi Ministerial Conference, 18 out of the 162 WTO members[2] had export subsidy entitlements and, thus, were officially permitted to subsidize their agricultural exports within the limits specified in their respective schedules. However, the original schedules did not contain deadlines for their

[1] WT/MIN(15)/45, available online: https://www.wto.org/english/thewto_e/minist_e/mc10_e/l980_e.htm

[2] The EU counted as one. Following the accession of Liberia and Afghanistan in July 2016, the WTO currently has 164 members.

use, a shortcoming purposely addressed by the Nairobi Decision.

The Decision establishes that developed country members eliminate their remaining, at the time of the Nairobi Ministerial Conference, export subsidy entitlements immediately on the adoption of the Decision. However, it contains a special provision (footnote 4 of the Decision) extending the termination period for the use of export subsidies by developed country members to the end of 2020, provided that they accept to eliminate, as of 1 January 2016, all export subsidies on products destined to Least Developed Countries (LDCs). Nevertheless, this extended deadline only applies to processed products, dairy products and pigmeat, and only if these were notified as having benefited from export subsidies in one of the three most recent notifications reviewed by the WTO Committee on Agriculture. An additional obligation related to this derogation is that no export subsidies should be applied either to new markets or to new products. The Decision also includes a provision for the EU, in the case of sugar, which endorsed the earlier relevant WTO Dispute Settlement rulings[3] maintaining the EU's sugar export subsidy quantity entitlement[4] until the end of September 2017.

[3] DS265, DS266 and DS283

[4] The export subsidies reduction commitments are expressed in terms of both the volume of subsidized exports and the budgetary outlays of these exports.

Table 3. Export subsidies end date per product as per the Nairobi Decision

Developed members		
Country	**Product**	**End date**
Australia	All products	Immediately
Canada	Dairy products, processed products	End of 2020
	All other products	Immediately
European Union	Pork meat, processed products	End of 2020
	Sugar	September 2017
	All other products	Immediately
Iceland	All products	Immediately
Norway	Pork meat, dairy products, processed products	End of 2020
	All other products	Beginning of 2016
Switzerland	Processed products	End of 2020
	All other products	Immediately
United States	All products	Immediately
Developing members*		
Brazil	Cotton	End of 2016
	All other products	End of 2018
Colombia	Cotton	End of 2016
	All other products	End of 2018
Indonesia	All products	End of 2018
Israel	Cotton	End of 2016
	Fruits and vegetables	End of 2022
	All other products	End of 2018
Mexico	All other products	End of 2018
South Africa	Cotton	End of 2016
	All other products	End of 2018
Turkey**	19 products	End of 2022
	All other products	End of 2018
Uruguay	All products	End of 2018
Venezuela**	50 products	End of 2022
	All other products	End of 2018

* New Zealand and Panama have not been included in the list, as they already set their entitlements to zero in 2000 and 2003 respectively.

** Turkey and Venezuela have not submitted their relevant notifications since 2003 and 1998 respectively, so the list of notified products is longer than the ones of the rest of the membership. That said, it does not mean that these two members have made use of the tool during recent years.

Consistent with the WTO differential treatment principle, the Decision does not call for the immediate elimination of export subsidy entitlements by developing country members. Instead, it allows them to retain such entitlements until the end of 2018 (or end of 2016 in the case of cotton). Like for developed country members, there is a special provision (footnote 5 of the Decision) that extends the date for the elimination of export subsidies by developing countries, in their case up to 2022, for those products that were notified as having benefited from export subsidies in one of the three most recent notifications reviewed by the WTO Committee on Agriculture. Unlike for developed countries, there is no particular restriction on the nature of such products.

The 18 WTO members with export subsidy entitlements prior to the Nairobi Decision include eight developed countries (Australia, Canada, European Union, Iceland, New Zealand, Norway, Switzerland and the United States) and 10 developing countries (Brazil, Colombia, Indonesia, Israel, Mexico, Panama, South Africa, Turkey, Uruguay and Venezuela)[5]. Using the information provided by the members in their three latest notifications examined by the WTO Committee on Agriculture before the adoption of the Nairobi Decision, table 3 shows the newly agreed end dates for the complete phasing out of export subsidy entitlements:

[5] The notions of developed and developing countries relate to the applicability of the Agreement on Agriculture Special and Differentiated Treatment provisions in favour of developing members. It may be noted that there is no WTO definition for "developed" and "developing" countries. Members announce for themselves whether they are "developed" or "developing" countries.

Another integral element of the Decision is the extended 2023 deadline agreed on the use of Article 9.4 of the Agreement on Agriculture, which allows developing countries to resort to export subsidies to cover or reduce the costs of marketing and transportation. LDCs and Net Food-Importing Developing Countries (NFIDCs) are granted seven more years, until the end of 2030, to phase out this type of support. The value of this extra flexibility is, however, limited, as these two country groups, and in particular the LDCs, are unlikely to have the resources or opportunity to use export subsidies.

TRENDS IN THE USE OF EXPORT SUBSIDIES

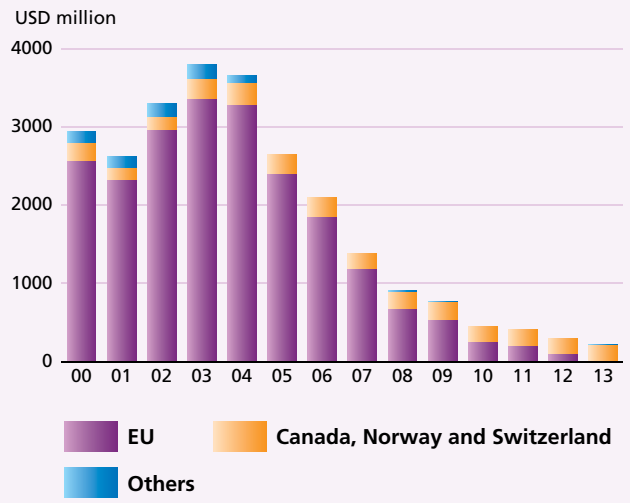
Of the 18 WTO members allowed to use export subsidies prior to the Nairobi Decision, only a handful of them actually did, most notably Canada, the EU, Norway and Switzerland. The EU had the largest scheduled entitlements and was the biggest user of the instrument in the past. As Table 4 shows, the use of export subsidies at the global level has declined significantly since 2005. In part, this could be explained by the steep increases in agricultural commodity prices witnessed since 2006, which considerably diminished the need to provide incentives for sustaining or boosting exports. However, the extensive reforms of the Common Agricultural Policy (CAP) of the EU, most notably the move away from using market price support for farm products, probably played an even greater role. These reforms resulted in reduced food stocks and smaller exportable surpluses. In accordance with the 2014-2020 CAP, export subsidies were last used by the EU in 2013.

Table 4. Notified export subsidies by WTO member (USD million)

	EU	Canada	Norway	Switzerland	Other	Total export subsidies entitlement of all WTO members
2000	2 546	0	45	188	151	10 703
2001	2 303	0	32	132	149	10 342
2002	2 949	0	33	136	169	10 611
2003	3 343	62	45	153	190	12 060
2004	3 269	72	55	147	101	12 880
2005	2 388	83	51	114	4	12 123
2006	1 834	88	53	109	4	12 866
2007	1 163	84	41	85	0	13 602
2008	660	84	37	96	19	14 402
2009	523	79	40	111	4	13 755
2010	230	86	45	73	2	13 324
2011	187	89	40	86	2	13 955
2012	76	101	40	69	1	13 074
2013	0	82	45	76	1	13 403

Source: Calculations based on information from the WTO Secretariat compiling WTO Members' notifications. Exchange rates from the IMF's international financial statistics

Figure 1. Notified export subsidies by WTO member



Source:Calculations based on information from the WTO Secretariat compiling WTO Members' notifications. Exchange rates from the IMF's international financial statistics

However, neither of these packages included export subsidies. To address market oversupply of dairy, which was one of the most affected sectors, the EU approved intervention buying-in of butter, skimmed milk powder and certain types of cheese, but did not make recourse to export subsidies to stimulate shipments to other markets.

While the EU is responsible for much of the reduction in export subsidies at the global level, the total use of the instrument notified by other WTO members, namely Canada, Norway and Switzerland, has remained largely unchanged over the last few years, averaging slightly above USD 200 million per year. However, the trend is not the same in the three countries. For instance, Canada only started providing export subsidies in 2003, while Norway maintained their level throughout the entire 2000-2013 period and Switzerland reduced them to less than half of their level in the early 2000s.

The main product categories subject to export subsidies by the WTO developed country members during the 2008-2013 period were the processed (or "incorporated") products, dairy products (primarily skim milk powder and cheese) and pigmeat (Table 5). The EU also funded exports of poultry and bovine meats. In addition, the EU notified 1.35 million tonnes of sugar as quantities that benefited from export subsidies in 2013 (Diaz-Bonilla and Hepburn, 2016). Not surprisingly, the above products are those that were agreed in Nairobi as eligible for longer phasing-out dates by developed country members.

Table 5. Main product categories receiving export subsidies (USD million)

	2008	2009	2010	2011	2012	2013	2014
Incorporated products	224.3	152.6	112.1	122.2	95.6	98.3	99.1
Skim milk powder (SMP)	74.2	72.1	30.2	31.5	31.2	30.1	28.0
Cheese	77.3	67.2	36.7	39.5	38.2	37.5	27.7
Other milk products	167.8	157.8	21.8	22.7	22.5	17.5	17.8
Pigmeat	58.9	28.4	37.1	31.3	10.4	14.3	8.0
Fruits and vegetables	16.0	17.5	1.6	2.0	0.7	1.1	1.8
Live animals	5.1	6.3	0.1	0.1	0.1	0.1	0.1
Bovine meat	42.8	42.4	88.1	42.8	2.3	0.0	0.0
Butter and butter oil	95.0	69.1	2.6	0.1	10.4	1.5	0.0
Poultry meat	129.2	137.3	98.8	108.0	71.1	0.0	0.0
Eggs	5.9	5.4	7.3	4.4	3.0	2.8	0.0

Source: Calculations based on information from the WTO Secretariat compiling WTO Members' notifications. Exchange rates from the IMF's international financial statistics

While the EU regulations allow for "exceptional measures" that can be activated in an event of a crisis to address threats of market disturbances, in recent years these did not include export subsidies, even when there were concerns about European exports. For instance, the EU introduced a series of measures to support farmers in 2014 and 2015 in response to the import restrictions imposed by the Russian Federation in August 2014, and an additional package of measures to counter both the declining agricultural prices for some products and the extension of the Russian import ban in March 2016[6].

[6] The package includes supporting the fixed intervention price for skimmed milk powder and butter and financial instruments for investments to improve competitiveness or introduce structural adjustments. http://europa.eu/rapid/press-release_IP-16-806_en.htm

SIGNIFICANCE OF THE DECISION FOR AGRICULTURAL COMMODITY MARKETS

Given that the use of export subsidies has already declined substantially over the last decade, the Nairobi Decision is not expected to result in a substantial additional reduction in the amount of export subsidies worldwide, at least until the expiration of the derogation for developed and developing countries.

Nonetheless, the Decision plays an important role in preventing an expansion in the use of export subsidies to stimulate exports and, by setting clear deadlines for their elimination, in reducing market uncertainty. However, given the current climate of relatively low international prices, which coincides with a period when some middle-income countries are expanding their budgets for agricultural support, export subsidies could again become an attractive option for the countries holding entitlements for their use.

A number of emerging economies provide support to promote agricultural production. In fact, the level of farm support, as measured by OECD's Producer Support Estimate (PSE), has been growing in some of the emerging economies, reaching the level of support in OECD countries, raising concerns over its possible effects on other, less developed, trading partners (OECD, 2016). In the case of over production and surplus availability, the Nairobi Decision would preclude them from using export subsidies. In this context, the extension of Article 9.4 allowing developing countries to cover or subsidize the costs of marketing and transportation is a notable element of the Decision, considering the increasing significance of some developing countries as exporters of agricultural commodities. Although the WTO Agreement on Agriculture foresaw that Article 9.4 would only apply until 2004, several WTO developing country members continued to subsidize marketing and transport costs after this date (Diaz-Bonilla and Hepburn, 2016), giving rise to considerable discussions in the WTO Committee on Agriculture regarding their compliance with WTO rules. The Nairobi Decision seems to cover transportation and marketing subsidies granted from 2004 to 2015, and not only those that will be granted after the endorsement of the Decision.[7]

Abrupt currency fluctuations can also create conditions to use export subsidies. For example, the strong appreciation of the Swiss franc against the Euro in 2015 triggered Switzerland's policy response in the form of an export subsidy to processed products. But consistent with the Nairobi Decision, the Swiss Government has recently initiated the process to replace, by 2020, the export subsidies scheme on processed products (the so-called "*loi chocolatière*") with a series of measures to support value-addition in the production of foodstuffs and to strengthen the competitiveness of the agribusiness sector.[8]

[7] Paragraph 8 of the Decision reads as following: "Developing country Members shall continue to benefit from the provisions of Article 9.4 of the Agreement on Agriculture until the end of 2023 … …"

CONCLUSIONS

While entitled WTO members, in particular the EU, have limited the use of export subsidies for agricultural products in recent years, the 2015 Nairobi Decision is important, as it confirms the commitment of members to refrain from using them and sets clear deadlines for their elimination. Thus, although the Decision may not result in a noticeable reduction in their use, given their already low levels, it will considerably diminish market uncertainties about a possible recourse to the instrument in the future. This is particularly critical considering the likely continuing long-term downward trend in real agricultural prices, which, in absence of this Decision, could induce some countries to use export subsidies. Also notable, as mentioned above, is the provision in the Decision allowing developing country members to subsidize transport and marketing costs until established dates, in particular given the growing role of some emerging economies as exporters of agricultural products.

REFERENCE LIST

Diaz-Bonilla, Eugenio & Hepburn, Jonathan. 2016. Export competition issues after Nairobi. In "Evaluating Nairobi: What does the outcome mean for trade in food and farm goods?" International Centre for Trade and Sustainable Development, Geneva, Switzerland. http://www.ictsd.org/sites/default/files/research/Evaluating%20Nairobi%20-%20What%20Does%20the%20Outcome%20Mean%20for%20Trade%20in%20Food%20and%20Farm%20Goods.pdf

OECD/FAO (2016). OECD-FAO Agricultural Outlook 2016-2025, OECD Publishing, Paris. http://dx.doi.org/10.1787/agr_outlook-2016-en

OECD (2016), Agricultural Policy Monitoring and Evaluation 2016, OECD Publishing, Paris.

WTO (2015). MC10 Ministerial Decision; 19 December 2015; WT/MIN(15)/45 — WT/L/980, https://www.wto.org/ english/thewto_e/minist_e/mc10_e/l980_e.htm

[8] https://www.seco.admin.ch/seco/fr/home/seco/nsb-news.msg-id-62445.html

MARKET POLICY DEVELOPMENTS

GRAINS: MAJOR POLICY DEVELOPMENTS MID-MAY TO MID-SEPTEMBER 2016*

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Argentina	Grains	Jun-16	Transport measures	Increased transport prices for cereals, oilseeds and respective sub products by 23.25 percent, due to increased operating costs, especially for fuel.
Australia	Wheat	Jun-16	Emergency permit	Issued an emergency permit to authorize the use of AGVET chemicals products for control of the Russian wheat aphid (pest) which has spread from South Australia into western Victoria.
	Maize	Jun-16	Import policy	Revoked import permit for maize grits grown and produced in New Zealand for industrial processing.
Azerbaijan	Wheat	Jun-16	Government procurement	Extended the term of high quality wheat procurement to 1 November 2016. In addition, the price of high quality wheat paid to local farmers was raised from AZN 250 (USD 407.5) to AZN 270 (USD 440) per tonne.
		Sep-16		Increased the price of high quality wheat paid to local farmers from AZN 270 (USD 440) to AZN 280 (USD 458) per tonne.
Bangladesh	Wheat	Jun-16	Government procurement	Suspended Open Market Sale Programme.
Brazil	Maize	May-16	Government procurement	Increased the minimum support price for the 2016 wheat crop. In the South Region, which is the country's main producing area, the price was raised by 10.5 percent to BRL 38.65 per 60 kg bag (USD 186 per tonne).
		Jun-16	Stock release	Auctioned 500 000 tonnes of maize from public stocks to meet domestic feed demand by pig and poultry farmers.
		Jul-16	Price support	Increased the 2016/2017 maize minimum support price by 22 percent, to BRL 16.50 per 50 kg bag (USD 99 per tonne).
		Jul-16	Government procurement	Increased the maize procurement limit per beneficiary/month, under the Programme Desk Sales (Programa Venda Balcao), from 6 to 14 tonnes in the Midwest, Southeast and Southern regions, and from 6 to 10 tonnes in the North and Northeast.
		Sep-16	Stock release	Auctioned additional 50 000 tonnes of maize from its state reserves.
Canada	Wheat	Jul-16	Production	Introduced, from 1 August 2016, two new wheat classes and eliminated three, to maintain the quality and improve the consistency of the Canadian wheat classes system. The new classes are Canadian Northern Hard Red (NHR) and Canada Western Special Purpose (CWSP); the eliminated classes are Canada Western Interim Wheat (CWIW), Canada Western General Purpose (CWGP) and Canada Western Feed (CWF).
	Grains	Aug-16	Transport measures	Extended the Fair Rail for Grain Farmers Act (Bill C-30) until 1 August 2017. The relevant provisions, inter alia, grant the government the right to set the volume of grains to be transported by railway companies and to impose fines on underperformers.
China	Wheat	May-16	Food security	Established a council of experts on national food security to seek expert advice on ways to reduce the country's large grain surpluses.
	Maize	Jun-16	Government procurement	Cancelled purchases of maize for temporary storage.
	Wheat	Jun-16	Government procurement	Implemented minimum support price of Yuan 2 360 (USD 355) per tonne in major wheat producing provinces of Hebei and Shandong from 30 June 2016.
	Maize	Aug-16	Production subsidies	Announced the release of the first round of subsidies for maize farmers in four provinces, amounting to approximately USD 4.51 billion for 2017.
		Aug-16	Production support	Announced, through its latest 5-year Plan for Science and Technology, renewed efforts to increase the efficiency of production by allowing farmers to grow GMO crops of soybeans and maize.
		Aug-16	Export tariff	Agreed to reintroduce the value-added tax (VAT) on exports of maize processed products, such as starch and alcohol. The VAT is set at 13 percent and will be effective from September 2016.

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Egypt	Wheat	Jun-16	Import policy	Indicated that imports of wheat with up to 0.05 percent levels of ergot fungus would be authorized.
		Jun-16		Announced that wheat imports containing any trace of ergot fungus would be rejected (i.e. zero tolerance).
		Jun-16	Government procurement	Terminated local wheat purchases one month ahead of harvest completion.
		Aug-16	Import policy	Indicated that wheat imports with up to 0.05 percent of ergot fungus would be authorized
		Aug-16		Decided that only imports of ergot-fungus-free wheat (zero tolerance) would be authorized, as per decree no. 1117/2016.
		Sep-16		Restated a 0.05 percent ergot tolerance level in wheat imports.
European Union	Wheat	Aug-16	Futures market	Announced by Euronext on 2 August 2016 that its milling wheat futures will include an extra delivery point at Rouen from September 2017.
	Maize	Sep-16	GMO policy	Authorized the use, for food or feed, of 11 varieties of GM maize produced by Syngenta Crop Protection. The authorization does not cover cultivation and is valid for 10 years. Any products with the GM maize strains are subject to labelling and traceability rules.
Honduras	Grains	Sep-16	Government procurement	The Ministry of Agriculture and the milling industries have signed the agreement setting the procurement prices for the purchase of the 2016 cereal crops. The price for white maize, fit for human consumption, was set at HND 7 150 (USD 308) per tonne for a total volume to be purchased amounting to some 8 percent of the aggregate production forecast in 2016. The agreement also includes purchases of yellow maize and sorghum for the feed industries. The measure aims to keep prices stable and boost domestic production.
India	Grains	Jun-16	Food safety	Issued new manuals on testing methodology for contamination in food and food products to improve food safety in the country. The government-issued manuals include methodologies for cereal and cereal products that will be implemented immediately by food safety laboratories.
	Maize	Jun-16	Production support	Started providing subsidy for maize seed to encourage farmers to cultivate maize as an alternative crop to the water-intensive paddy.
		Jun-16	Government procurement	Announced Minimum Support Prices (MSP) for 2016/17 crops. The MSP for maize was raised by 3 percent to INR 13 650 (USD 203).
		Jun-16	Production support	Announced that farmers in Haryana will be given seeds of hybrid maize, for a value of up to Rs 2 000 per acre (USD 74 per hectare), free of cost under a crop diversification programme, in order to promote cultivation.
	Wheat	Jun-16	Import policy	Extended the 25 percent wheat import tax in place since October 2015.
	Maize	Jul-16	Import quota	Issued licenses for duty-free imports of 500 000 tonnes of maize to ease soaring prices of maize due to strong demand from local industries.
		Jul-16	Import tariff	Extended the period in which government parastatal entities can apply for the importation of 500 000 tonnes of maize at zero duty under the Indian fiscal year 2016/17 (from March 31, 2016 to August 8, 2016) tariff rate quota. The extension follows concern expressed by local starch and poultry industries over rising maize prices.
	Wheat	Sep-16	Import policy	Lowered the previous wheat import tax from 25 percent to 10 percent.
Indonesia	Wheat	Sep-16	Import quota	Stopped issuing feed wheat import certificates for 2016/17 to stimulate higher usage of domestic maize for feeding and discourage imports of competitively priced feed wheat.
	Maize	Sep-16	Government procurement	Set the reference prices for a number of basic food items, including rice, maize and soybeans through a Ministerial Regulation. For each food item, two reference prices are set; a floor (minimum) price intended to protect farmers against sharp drops in market prices and a ceiling (maximum) price to protect consumers against exceptionally high prices. The reference prices are valid four months

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Japan	Wheat	Jul-16	Import ban	Temporarily suspended new imports of Western White Wheat following reports that the Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture (USDA) was investigating 22 bioengineered wheat plants found in a field in Washington State.
		Sep-16		Ended the temporary suspension of white wheat imports of US Western White wheat.
Lebanon	Wheat	Jul-16	Import policy	Introduced more stringent controls on shipping and storage facilities, following the Public Health Ministry's discovery of carcinogen in wheat import samples.
Lesotho	Maize	May-16	Food	Announced it will subsidize consumer prices of maize meal, beans and pulses, so as to cut consumer retail prices by 30 percent for one year, starting from 1 June 2016. The government has allocated over 1 million rand (USD 70 747) for the subsidies, with the aim of easing access to basic food commodities.
Kazakhstan	Grains	Jul-16	Production support	Reinstituted per hectare crop subsidies by the Ministry of Agriculture, which had been replaced in January 2016 by investment subsidies.
	Wheat	Aug-16	Bilateral agreement	Increased the list of exported agricultural products to China, which includes wheat and other types of cereals. Kazakhstan aims to increase the quotas for the supply of wheat to China from 60 000 tonnes to 400 000 tonnes per year.
	Grains	Sep-16	Procurement price	Announced the new procurement prices for 2016 grains. Wheat 3rd grade will be procured at a price ranging from KZT 41 000 (USD 120) to KZT 50 000 (USD 146), while in 2015 it was purchased at KZT 41 000 (USD 120) per tonne. Price for wheat 4th grade will range from KZT 34 000 (USD 99) to KZT 36 000 (USD 105) per tonne, against KZT 31 000 (USD 91) per tonne in 2015, while the price for barley 2nd grade remained unchanged from last year at KZT 25 000 (USD 73). All prices are inclusive of VAT.
Morocco	Wheat	Jun-16	Import duty	Raised soft wheat import custom duty from 30 percent to 65 percent. The measure aims to stabilize domestic prices at Dirham 2 800 – 2 850 (USD 290.85 – USD 296.04).
Nigeria	Maize	May-16	Production support	Announced the Federal Ministry of Agriculture and Rural Development (FMARD) will distribute 7 500 tonnes of maize to poultry farmers across the country.
Pakistan	Wheat	Aug-16	Import tariff	Increased regulatory duty on wheat imports from 40 percent to 60 percent. The duty was already increased in June 2015 from its previous level of 25 percent. The measure aims to discourage wheat imports and protect local farmers from lower wheat prices in international markets.
	Wheat	Sep-16	Government procurement	The Pakistan Flour Mills Association (PFMA) increased flour price by Rs20 per 20 kg bag (USD 0.76 per tonne).
Russian Fed.	Feed ingredients	Aug-16	Import ban	Introduced temporary restrictions on imports of forages and feed additives from Ukraine.
	Grains	Aug-16	Government market intervention	Commenced state purchasing interventions for 2016 grain crops, including wheat, rye, barley and maize. Government plans to purchase up to 1 million tonnes of grains by the end of 2016, and up to 2 million tonnes in the 2016/17 marketing year (July/June).
	Wheat	Aug-16	Export duty	Abolished the export duty on wheat until July 2018.
		Sep-16		Officialy made public the decision to abolish the export duties on wheat: resolution #966 dd. September 26, 2016. According to the signed resolution, the zero rate for the export duty on grain has been set until July 2018.
South Africa	Wheat	Aug-16	Import duty	Raised import duty on wheat by 30 percent from R 1 224.41 (USD 82) per tonne to R 1 519.40 (USD 102.6) per tonne.

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Korea, Rep. of	Wheat	Jul-16	Import ban	Suspended, temporarily, new purchases of Western White Wheat following reports that the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) was investigating 22 bioengineered wheat plants found in a field in Washington State.
		Aug-16		Ended the temporary import ban on wheat and flour from Washington State after testing of wheat imports from the United States did not detect any genetically modified wheat.
Syria	Wheat	Jun-16	Government procurement	Raised domestic wheat price by 67 percent, to SYP 100 per kg (USD 455 per tonne).
Ukraine	Wheat	Aug-16	Bilateral agreement	Signed an agriculture cooperation agreement with Indonesia, to invest in wheat production in Indonesia.
	Barley, maize	Aug-16	Export ban	Banned export of products from farmers whose crops had been found to be infected by the State Service for Food Safety and Protection of Consumers of Ukraine. The move follows the detection of pests, disease-causing organisms and nematodes in barley, soybean and maize grown by some farmers, which violates phytosanitary requirements for exports from Ukraine to China.
Venezuela	Wheat	Aug-16	Government market intervention	Announced that 24 state-run companies will distribute 219 000 tonnes of imported wheat to ensure sufficient supplies for the production of bread.
Vietnam	Maize	Sep-16	Production support	Announced that the government will provide VND 3 million (USD 134.5) for every hectare of land switched from rice to maize cultivation, in order to reduce maize imports and increase domestic maize production.
Zambia	Maize	Jun-16	Export policy	Announced that maize exports of the new 2016 crop will only be authorized from the end of September (marketing year started in May) in order to ensure domestic needs are met.
		Jul-16	Government procurement	Increased the maize purchasing price by 13 percent, from MWK 75 per 50 kg bag (USD 2 per tonne), set in May, to MWK 85 per 50 kg bag (USD 2.4 per tonne) for the 2016/17 marketing year (May/April). The adjustment was made to better reflect higher maize input prices, which farmers have faced since the 2015 depreciation of the local currency.

* A collection of major grain policy developments starting in July 2010 is available at: http://www.fao.org/economic/est/est-commodities/commodity-policy-archive/en/?groupANDcommodity=grains

RICE: MAJOR POLICY DEVELOPMENTS MID-MAY TO MID-SEPTEMBER 2016*

COUNTRY	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Bangladesh	Jun-16	Food subsidies	Set a target to raise foodgrain distribution by 7 percent to 2.97 million tonnes, as part of its 2016/2017 budgetary allocations. Out of this volume, 2.0 million tonnes would be in the form of rice, up from a revised target of 1.6 million tonnes for 2015/2016.
	Jun-16	Budgetary allocations, production support, Government procurement	Kept allotments for agricultural subsidies unchanged at BDT 90 billion (USD 1.1 billion), as part of its 2016/2017 budgetary allocations. Officials will seek to facilitate credit, extension services, research, production and distribution of high yielding seeds, as well as promote the use of organic fertilizers in order to sustain productivity improvement. In addition, the government would aim to raise domestic procurement of rice in 2016/2017 to 1.85 million tonnes, up from 1.43 million tonnes for 2015/16.
	Jun-16	Import tariff	Set the government import target for the 2016/2017 fiscal year at zero, as part of its 2016/2017 budgetary allocations. In addition, import duties on husked, semi/wholly milled and broken rice were raised from 20 to 25 percent.
	Aug-16	Government procurement, purchasing prices	Extended the 2016 Boro procurement target by an additional 250 000 tonnes, to a total of 700 000 tonnes of paddy and 850 000 tonnes of milled rice. Supplies are to be purchased by 30 September 2016, at a price of BDT 23 per kg (USD 287 per tonne) for paddy and BDT 32 per kg (USD 400 per tonne) for rice.
	Sep-16	Food subsidies	Launched the "Food-friendly Programme", under which the government will provide 5.0 million ultra-poor families with 30 kg of rice per month for a period of five months (September-November and March-April), at a subsidized price of BDT 10 (USD 0.1) per kg.
Brazil	Jul-16	Minimum support prices	Adjusted minimum support prices (MSPs) for the 2017/18 season (2016/17 for Brazil) to be effective from February 2017 to January 2018. In the case of fine long grain paddy, these were raised by 18 percent to BRL 699.4 (USD 211) per tonne for the South region (except Paraná) and by 18 percent to BRL 699.5 (USD 211) for all other regions. The MSPs for long-grain paddy were left unchanged at BRL 378 (USD 114) per tonne for the South region (except Paraná) and at BRL 407.5 (USD 123) per tonne for the Southeast, Northern, Northeast, and Centre West regions and the state of Paraná.
	Sep-16	Stock release	Sold 22 700 tonnes of paddy from state reserves, out of a total of 52 900 tonnes offered through four auctions held in September 2016.
Cambodia	Jun-16	Export promotion, credit	Agreed to extend USD 20–30 billion worth of credit to help traders purchase, process and store paddy for export, according to press reports. Additional assistance measures to the sector would reportedly include increased border surveillance to avert the inflow of rice across borders.
Colombia	Aug-16	Support prices, warehouse receipts programme, import quota	Decided that the storage incentive programme would cover 500 000 tonnes of paddy harvested in the second half of 2016. The scheme would be executed in two phases: the first covering up to 173 000 tonnes of paddy, starting from August 2016; while the remaining volume would be covered successively depending on available financial resources. The programme will provide COP 28 890 (USD 9.7) to cover the cost of storing a tonne of paddy per month, on condition that these supplies be purchased at reference prices ranging from a minimum of COP 127 000 to a maximum of COP 157 000 per 125 kg of paddy (USD 342-422 per tonne), depending on the various producing regions. Purchases conducted under the programme would also serve to determine potential rice import requirements and their allocation among its participants in 2017 and 2018.
Costa Rica	Sep-16	Consumer prices	Amended ceiling/floor prices of various rice qualities consumed in the country, effective 6 September 2016. According to the decision, the price band of the widely consumed 80–20 rice would be replaced by fixed retail price of CRC 621 (USD 1.1) per kg, representing a 1.6 percent reduction from the previously applicable minimum price.
Ecuador	May-16	Production support, support prices	Set paddy producer prices for the 2016 season at USD 35.5 per 200 pounds (USD 391 per tonne), up 3 percent from levels applicable since April 2013.
Egypt	May-16	Import quota	Announced that the General Authority for Supply Commodities (GASC) would import 80 000 tonnes of rice for immediate delivery, through direct contracts with suppliers. The volume would serve to ensure sufficient local availabilities during Ramadan.
	Aug-16	Government procurement	Announced that it would target to absorb 2.0 million tonnes of domestic paddy, under its 2016 procurement campaign. The drive would offer farmers EGP 2 300–2 400 (USD 259–270) per tonne of paddy sold.
	Aug-16	Export ban	Decided that the ban on milled rice exports would remain in place and that it would be extended to all forms of rice, in order to ensure sufficient local availabilities and stable prices. Fully broken rice had been previously exempted from export restrictions.

COUNTRY	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Ghana	Jul-16	Import restrictions	Rescinded the ban on rice imports through land borders, in place since November 2013. According to the decision, imports through the Elubo, Sampa and Nkrankwanta borders would be permitted as of 1 August 2016, with further border points to be open successively for overland deliveries.
India	Jun-16	Food subsidies	Approved an additional monthly allocation of 42 000 tonnes of foodgrains for Below Poverty Line (BPL) families and of 20 500 tonnes for Above Poverty Line (APL) families for distribution in Tamil Nadu, Kerala and Nagaland until June 2016, or until the National Food Security Act is implemented in these states.
	Jun-16	Support prices, government procurement	Raised minimum producer prices by 4.3 percent to INR 14 700 (USD 219) per tonne for common variety paddy and by 4.1 percent to INR 15 100 (USD 225) per tonne for Grade A paddy.
	Aug-16	Export restrictions	Permitted exports of basmati rice through Land Custom Stations on the Indo-Bangladesh and Indo-Nepal borders, subject to volumes being registered with the Director General of Foreign Trade (DGFT). Effective 1 October 2016, exports of basmati rice under Documents against Acceptance will also no longer be permitted, unless such transactions are guaranteed by a bank or the Export Credit Guarantee Corporation of India, Ltd. (ECGC).
Iraq	Jul-16	Import agreement	Signed a memorandum of understanding with the United States, under which the latter would provide Iraq with technical assistance on international purchases of agricultural products, while being considered the preferred supplier of rice in tenders conducted by Iraq to source supplies for its public distribution system.
Kenya	Jun-16	Import tariff	Renewed exemptions to the 75 percent rice import duty applicable under the Common External Tariff of the East African Community. Rice imports are to accrue a tariff of 35 percent (or USD 200 per tonne, whichever is higher) for one year, effective 1 July 2016.
Liberia	Aug-16	Import tariff	Renewed import tariff exemptions on semi/wholly milled and broken rice, with immediate effect. The move is geared at keeping supplies of rice at affordable prices for domestic consumers.
Mexico	Jun-16	Import quota	Put in place a mechanism to respond to supply disruptions or price hikes by opening duty free import quotas for paddy, semi/wholly-milled and broken rice originated in countries not party to existing trade agreements.
Myanmar	May-16	Production support	Announced that the Myanmar Agricultural Development Bank (MADB) would expand loans for monsoon paddy by 50 percent to MMK 150 000 per acre (USD 299 per ha). Interest rates on these loans would rise from 5 to 8 percent, with the previous 10-acre (4 ha) ceiling per farmer maintained.
	May-16	Government procurement, emergency reserve	Announced that the government would procure 30 000 tonnes of rice to store as an emergency reserve.
Nepal	Jun-16	Budgetary allocations, production support	Announced that NPR 5.78 billion (USD 53 million) would be set aside for the Prime Minister Agricultural Modernization Project, as part of its 2016-17 budgetary allocations. The project will seek to make the country self-sufficient in rice in two years. Specific interventions will include establishing Agricultural Production Areas to bolster production, processing and marketing capacity through subsidies on basic inputs, agricultural equipment and for the construction of storage, processing, training and marketing facilities. Steps would also be taken to prevent agricultural land from being idled, to enhance access to credit and subsidize insurance premiums, while NPR 5.47 billion (USD 50 million) would go for the provision of fertilizers and seeds. In addition to plans to bolster irrigation coverage in five years, the production of summer and aromatic rice would be promoted and minimum prices for paddy announced ahead of planting time.
Nicaragua	May-16	Production support	Approved the Ley de Fomento a la Producción de Granos Básicos y Ajonjolí de las Pequeñas y Pequeños Productores, under which smallholders cultivating a maximum of 14 ha of sesame seeds or basic food grains, including rice, will have a 3 percent interest rate cut on loans.
Nigeria	Jun-16	Production support	Launched a scheme that will see 500 threshers distributed to rice producers across 12 states at discounted prices.
	Aug-16	Production support	Launched the Agricultural Sector Policy Roadmap ("Green Alternative"), setting out food security, import substitution, job creation and economic diversification as its 2016–2020 policy priorities. For the purpose, it would seek to promote productivity improvements, private sector investment in agriculture, while pursuing institutional strengthening and realignment, in partnership with state-level authorities. Initial focus would be given to improving food security by expanding production of rice, wheat, maize, soybeans and tomatoes, while also promoting exports of cocoa, cassava, oil palm, sesame and gum Arabic.

COUNTRY	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Pakistan	Jun-16	Production support	Announced that it would extend fiscal concessions approved under last year's budget for another year, as part of its 2016/2017 budgetary allocations. The target on agricultural credit disbursements was raised to PKR 700 billion (USD 6.6 billion), with a PKR 1 billion (USD 9.5 million) set aside for the credit guarantee scheme. Steps to lower the mark-ups on loans by 2 percent were also announced. In addition, prices of urea and diammonium phosphate would be cut further, pesticides exempted from sales taxes, and electricity charges on agricultural tube wells lowered by 40 percent, effective from 1 July 2016.
Panama	Jun-16	Import quota	Approved an import quota of 45 360 tonnes of paddy for 2016, liable for a 3 percent import tariff.
Philippines	Jun-16	Production support	Announced that it would seek to bring an additional 1.0 million hectares under paddy cultivation, in an effort to reach self-sufficiency in rice. Increased focus would also be placed on bolstering small-scale, communal irrigation, to lower production costs and raise yields, including by promoting the cultivation of hybrid varieties.
	Aug-16	Import quota	Held a tender to import 250 000 tonnes of 25% broken rice, on a government-to-government basis, in order to refurbish stockpiles and compensate for output losses associated with the El Niño weather anomaly. Of this volume, 150 000 tonnes were awarded to Viet Nam, with Thailand supplying the balance.
	Sep-16	Import quota	Opened applications to the private sector to import 805 200 tonnes of rice under Minimum Access Volume (MAV) country-specific and omnibus quotas. Imported volumes are to comprise specialty rice and/or well-milled rice with less than 25% brokens. They will be liable to a 35 percent import duty and are to arrive in the country no later than 28 February 2017.
Republic of Korea	Sep-16	Government procurement	Announced that the government would purchase 390 000 tonnes of rice from the 2016 harvest to stabilize local quotations. Payment for these purchases would be issued in advance, with the volume comprising 360 000 tonnes of rice, as part of the Public Rice Stockholding Programme, and 30 000 tonnes as the country's contribution to the ASEAN Plus Three Emergency Rice Reserve (APTERR). Additional support measures would include loans to aid processors' purchase of local supplies, and steps to encourage greater export and use of rice for non-food purposes.
Rwanda	Jun-16	Import tariff	Renewed exemptions to the 75 percent rice import duty applicable under the Common External Tariff of the East African Community. Accordingly, rice imports will continue to accrue a tariff of 45 percent (or USD 345 per tonne, whichever is higher) for a period of one year, effective 1 July 2016.
Senegal	Aug-16	Production support	Oversaw the signing of a memorandum of understanding between sector representatives under which importers committed to purchase 50 000 tonnes of rice from the 2016 season harvest and 1 500 tonnes currently stored by millers. Under the accord, importers would pay XOF 240 000–245 000 (USD 407–415) per tonne of 100% broken rice and XOF 275 000–280 000 (USD 466–475) per tonne of whole-grains.
Sri Lanka	Aug-16	Government procurement	Decided to purchase 120 000 tonnes of paddy from the 2016 Yala harvest, allocating LKR 4 billion (USD 27 million) for the purpose. Under the procurement drive, the Paddy Marketing Board will offer farmers LKR 50 per kg of Keeri Samba purchased (USD 337 per tonne), LKR 41 per kg (USD 276 per tonne) of Samba paddy and LKR 38 per kg (USD 256 per tonne) in the case of Nadu paddy.
Taiwan province of China	Jun-16	Production support	Announced that it would implement a pilot project in six townships in order to encourage environment-friendly, high-quality rice production. Under the initiative, qualified farmers would receive a direct payment of NTD 10 000 (USD 315) per hectare, as an alternative to the prices guaranteed under the state's purchasing programmes. The outlay would be issued for the second crop of 2016, to farmers possessing a land lease contract or other farming arrangements and who have cultivated the second crop in the preceding three years.

COUNTRY	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Thailand	May 16 to Aug 16	Stock release	Sold 3.0 million tonnes of rice from government stockpiles through seven auctions held between May and August. The latter offered a combined 8.3 million tonnes of rice for domestic use and export.
	Jun-16	Production support	Approved a budget of THB 6.8 billion (USD 194 million) to implement an on-farm mortgaging programme for fragrant and glutinous paddy from northern and northeastern provinces. The scheme will be run between May and December 2016, also providing traders and processors with an interest rate cut to encourage them to store paddy for up to six months.
	Jun-16	Production support	Approved a budget of THB 45.6 billion (USD 1.3 billion) to assist rice farmers affected by drought. The initiative will provide 3.7 million rice-farming households with an outlay of THB 1000 per rai (USD 179 per hectare) for up to 10 rai (1.6 hectares), in addition to extending debt repayment periods for two years and lowering interest rates on loans provided by the Bank of Agriculture and Agricultural Cooperatives (BAAC). A separate THB 60 per rai (USD 11 per hectare) will be extended to producers availing themselves of crop insurance.
	Jul-16	Export promotion	Announced that it would take steps to streamline export procedures of strategic products, including rice. The initiative targets to cut the time required to export these commodities by 20 days and to cut the costs incurred by traders by 60 percent, by reducing the number of entities involved in procedures and encouraging the adoption of electronic platforms.
	Sep-16	Stock release	Announced that it would suspend the release of supplies from government reserves in order to avoid downward pressure on local quotations at harvest time.
Uganda	Jun-16	Import tariff	Lowered import duties applicable under the Common External Tariff of the East African Community. According to the decision, imports of paddy and husked rice will be liable to a 75 percent import duty (or USD 250 per tonne, whichever is higher), as opposed to the 75 percent rate or (USD 345 per tonne, whichever is higher), normally applicable. The measure will be effective for one year, starting on 1 July 2016.

* The full collection starting in January 2011 is available at: http://www.fao.org/economic/est/est commodities/commodity policy archive/en/?groupANDcommodity=rice

OILCROPS: MAJOR POLICY DEVELOPMENTS MID-MAY TO MID-SEPTEMBER 2016*

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Argentina	Soybeans	Jun-16	Seed market regulation	Entrusted a state agency with the testing of soybeans and other seed for the presence of GM traits, with a view to enable private companies to consistently collect royalty payments.
	Biodiesel	Jul-16	Bilateral trade dispute	Appealed the findings of the WTO dispute panel regarding the anti-dumping measures taken by the European Union against biodiesel imports from Argentina.
	Biodiesel	May-16 to Aug-16	Export policy	Adjusted periodically the level of export taxes for biodiesel, with a view to stimulate domestic biodiesel consumption, while also maintaining adequate incentives for biodiesel exporters.
Australia	Biodiesel	Jul-16	Renewable energy policy	Released funds to promote the production and use of biofuels as part of the government's 10-year biofuels roadmap.
Brazil	Arable crops	Jun-16	Agricultural policy	Renewed and raised funding for agricultural support programmes in 2016/17, focusing on seasonal loans for production and marketing operations.
Canada	Vegetable oil derivatives	Jun-16	Market regulation	Requested industry stakeholders to provide data on the presence of partially hydrogenated oils in domestic or imported foods, with a view to eventually eliminate industrially produced trans fats in processed foods.
	Oilseeds, oils, meals	Jul-16	Free trade agreement	Completed negotiations of free trade agreement with Ukraine, granting immediate duty free access for oilseed, oil and meal imports from Ukraine.
Chile	Saturated fat	Jun-16	Food standards / health policy	Introduced legislation to regulate labelling of the nutritional composition of food products, notably the content of saturated fat, sodium, sugar and calories.
China	Soybeans	Jun-16	Agricultural policy	Released a 5-year plan promoting the expansion of soybean cultivation, including incentives to encourage farmers to reduce maize plantings in favour of soybeans.
	Soybean	Jun-16	Public procurement / state reserves	Resumed soybean sales from state reserves via weekly auctions, in a bid to ease tight domestic supplies.
	Rapeseed	Aug-16	Import restrictions	Delayed the implementation of stringent rules on rapeseed imports from Canada meant to reduce the risk of blackleg disease spreading to China.
	Soybean	Aug-16	GMO policy	Released a 5-year plan promoting the local development of GM crop varieties, including herbicide-resistant soybean
	Soybeans	Sep-16	Production support	Introduced subsidies for farmers in Heilongjiang province who plant soybeans following a maize crop, in a bid to promote healthy crop rotation practices.
Colombia	Palm oil	Jul-16	Environmental policy	Ordered a palm oil company to suspend operations due to alleged violations of environmental regulations.
European Union	Vegetable oil derivatives	Jun-16	Health policy	Issued warning concerning three toxic substances that form in food processing when vegetable oils are refined at high temperatures.
	Arable crops	Jul-16	Environmental / health policy	Extended the license approval for glyphosate (a chemical found in herbicides used on oilcrops and grains worldwide) for a limited period of 18 months, and requested the agro-chemical industry to provide additional scientific evidence on the chemical's safety.
	Soybeans	Jul-16	GMO policy	Authorized three new GM soybean varieties for importation and processing for food and feed use, but not cultivation.
	Olive trees	Jul-16	Disease control	Opened a second infringement procedure against Italy over alleged delays in applying measures against the spread of the xylella fastidiosa bacterium in Apulia.
	Compound feed (incl. oilmeals)	Jul-16	Market regulation	Endorsed a code of good labelling practices for compound feed. The code was developed jointly by the EU feed industry and farmer associations, with a view to harmonize practices across EU Member States.
	Biodiesel	Jul-16	Bilateral trade dispute	Appealed the findings of the WTO dispute panel regarding the anti-dumping measures taken by the EU against biodiesel imports from Argentina.

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Ghana	Oil Palm	Sep-16	Sector development support	Approved creation of the Oil Palm Development Board to regulate the oil palm sector and promote domestic production.
India	Palm oil	Jun-16	Production support	Introduced a market intervention scheme for palm oil, as part of efforts to enhance domestic oilcrop production and reduce the country's dependence on vegetable oil imports.
	Copra	Jun-16	Public procurement / production support	Reinstated copra procurement in Tamil Nadu state, with a view to protect low-income farmers from a drop in market prices.
	Coconut oil	Jun-16	Sector development support	Extended financial assistance to farmers in Tamil Nadu state aimed at replacing senile, disease-infected and unproductive palms, and at rejuvenating existing trees through integrated management practices.
	Oils and fats	Jun-16	Food standards	Released new manuals on testing methodologies and analyses for various food products, including oils and fats.
	Groundnuts, soybeans, sunflowerseed, nigerseed, sesamum	Jul-16	Production support	Raised minimum support price for groundnuts, soybeans, sunflowerseed, nigerseed and sesamum.
	Edible oils	Jul-16	Market policy	Invited all states to remove local taxes levied on essential food items, including edible oils, with a view to ensure adequate supplies of essential food items at prices affordable to consumers.
	Coconut oil	Jul-16	Market policy / health policy	Introduced, in Kerala state, a 5 percent levy on coconut oil sales and a 14.5 percent "fat tax" applied to food items sold through branded outlets.
	Olive trees	Jul-16	Sector development support	Set up, in Rajasthan state, an olive oil extraction plant and supported the planting of olive saplings, with a view to promote local production and reduce the country's dependence on vegetable oil imports.
	Oils and fats	Aug-16	Food safety policy	Postponed the enforcement date for maximum limits of trans fatty acid levels in edible fats, oils and fat emulsions to February 2017.
	Coconut palm	Aug-16	Sector development support	Allocated funds to promote improved processing methods, product diversification and value addition in the coconut sector.
	Mustardseed	Aug-16	GMO policy	Issued a favourable assessment of GM mustardseed, based on safety tests and checks on potential risks to health and ecology.
	Copra	Sep-16	Market support	Set up copra procurement centres across Karnataka state in an effort to support growers affected by price drops.
Indonesia	Oil palm	May-16	Production support	Released funds to support smallholder oil palm replanting, with a view to raise yield levels.
	Palm oil	May-16 to Sep- 16	Export policy	Left in place a sliding export tax regime for palm oil used to protect the interests of domestic producers and consumers.
Kiribati	Coconut oil	Jun-16	Renewable energy policy	Promoted use of coconut oil in power generation, with a view to curb dependence on fuel imports.
Malaysia	Biodiesel	Jul-16	Renewable energy policy	Delayed the shift – from 7 to 10 percent – of mandatory blending of palm oil-based biodiesel into transportation fuel, without providing a firm implementation date.
	Palm oil	May-16 to Sep- 16	Export policy	Left in place a sliding export tax regime for palm oil used to protect the interests of domestic producers and consumers.
Myanmar	Selected oilseeds/ edible oils	Aug-16	Export policy	Relaxed export restrictions on a number of agri-based products, including sesame oil, mustard seed/oil, sunflower seed/oil, and by-products of edible oil extraction, with a view to allow the domestic industry to tap new export opportunities.
Nepal	Biodiesel	Jul-16	Renewable energy policy	Established a committee to examine the possibility of producing biodiesel from jatropha, with a view to reduce the country's dependence on imported fossil fuels.

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Philippines	Biodiesel	May-16	Renewable energy policy	Revised the country's specifications for coconut oil-based biodiesel, raising the required quality standard.
	GMO crops and derived products	Jun-16	GMO policy	Reversed – following the reform of the country's regulatory process for GMOs – an earlier decision to suspend the testing, contained use, importation and marketing of GM crops and derived products.
Russian Federation	GMO crops	Jul-16	GMO policy	Prohibited cultivation of GM crops in the country and strengthened state control over importation and processing of GM organisms.
	Palm oil	Aug-16	Trade dispute settlement	Received ruling from WTO dispute settlement panel establishing that import duties applied on selected products imported from the EU – including palm oil and its fractions – violated WTO rules.
	Sunflowerseed	Sep-16	Export policy	Lowered the country's duty on sunflowerseed exports outside the Eurasian Economic Union.
	Palm oil	Jul-16	Health policy	Dropped plans to introduce specific safety standards for tropical oils, in particular palm oil, citing lack of scientific evidence about alleged human health hazards.
Sri Lanka	Edible oils	May-16	Import policy	Raised import levies for crude and refined vegetable oils.
Thailand	Biodiesel	Jun-16	Renewable energy policy	Signed MoU with private energy and logistics companies to use B20 (transportation diesel containing 20 percent palm oil-based biodiesel) for their heavy vehicles.
	Biodiesel	Jul-16 to Aug-16	Biodiesel policies	Reduced, temporarily, the mandatory blending of transportation diesel with palm oil-based biodiesel from 7 to 3 percent, in a bid to end a temporary shortage in domestic cooking oil supplies.
Uganda	All agricultural goods	Aug-16	Agricultural policy	Launched a subsidized crop insurance scheme, in an effort to improve farmers' access to credit and increase household food security.
Ukraine	Oilseeds, oils, meals	Jul-16	Free trade agreement	Completed negotiations of a free trade agreement with Canada, gaining immediate duty free access for exports of sunflower oil, rapeseed and soybeans products to Canada.
United Kingdom	Soybean	Jun-16	Bilateral cooperation	Launched a funding scheme to support the development and improvement of regional soybean value chains and regional trade flows in East and Southern Africa.
United States	Biodiesel	Jun-16	Renewable energy policy	Extended through 2024 the biodiesel production credit in place in Iowa state.
	GM crops	Jul-16	GMO labelling	Passed new bill regulating mandatory labelling of food products containing GMOs. The new bill overrides more stringent measures recently passed (or considered) in individual states.
	GM products	Aug-16	GMO policy	Issued a statement authorizing companies to make labelling claims that no GM ingredients were used in meat, poultry and egg products.
Vanuatu	Coconut	Jul-16	Sector development support	Launched a 9-year plan aimed at reviving the country's coconut industry after the devastation caused by Cyclone Pam last year.
Vietnam	Vegetable oils	May-16	Import policy	Lowered import tax on vegetable oil transactions introduced as a temporary safeguard measure, and announced that the tax would be phased out by May 2017.

* A collection of major policy developments starting in January 2011 is available at: http://www.fao.org/economic/est/est-commodities/commodity-policy-archive/en/?groupANDcommodity=Oilseeds,%20oils%20and%20meals

MEAT: MAJOR POLICY DEVELOPMENTS MID-MAY TO MID SEPTEMBER 2016*

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
Canada	All	Jul-16	Free Trade Agreement	Signed a Free Trade Agreement with Ukraine, providing duty-free access to Canada for an unlimited quantity of beef, veal and fresh and chilled pigmeat, and for 20 000 tonnes of frozen pigmeat.
China	Pigmeat	Sep-16	Market Access	Authorized pigmeat import from a further five plants in Spain, bringing the total to 26.
China (Hong Kong – SAR)	Poultry meat	Jun-16	Trade suspended	Suspended live poultry trade after avian flu (H7N9) was detected in a public market.
Guatemala	Pigmeat	Aug-16	Animal health regulation	Declared itself free of classical swine fever after five years of prevention work, thus allowing resumption of export of live pigs, pigmeat products and by-products.
Japan	Bovine meat	May-16	Import ban lifted	Lifted an embargo on bovine meat imports from Italy, following the 2013 opening of its market to bovine meat from some other EU Member States (France, Ireland, the Netherlands, Poland, Denmark and Sweden). The ban on bovine meat imports from the EU was introduced in 2001, due to the perceived risk of bovine spongiform encephalopathy (BSE) contamination.
	Pigmeat	Aug-16	Import ban	Temporarily suspended feeder and breeding cattle imports from Australia, following positive testing for bovine Johne's disease (BJD).
	Feeder cattle	Aug-16	Import ban lifted	Announced the reopening of trade in feeder and breeding cattle from Australia, following agreement on improved export certification processes for all consignments. In May 2016, Japan suspended live cattle exports from Australia in response to cattle testing positive for BJD in post-arrival quarantine. The strengthened conditions include lifetime traceability for all animals and biosecurity clearance for the property of origin.
Mexico	Bovine meat	Jun-16	Import ban lifted	Reopened its market to bovine meat from Canada, closed since May 2003 after a case of BSE in Canada.
Peru	Poultry meat	Aug-16	Import ban extended	Extended its suspension of imports of live poultry, hatching eggs and poultry products from certain areas of France, following outbreaks of avian influenza.
Puerto Rico	Pigmeat	May-15	Market Access	Opened its market to imports of pigmeat from Brazil.
Russian Federation	All	Jul-16	Import ban extended	Extended the ban on imports of meat from Australia, Canada, the European Union, Norway and the United States until the end of 2017.
United States	Bovine meat	Aug-16	Import ban lifted	Lifted its ban on the import of fresh, chilled or frozen bovine meat from selected plants in designated states in Brazil, following recognition that the plants concerned met the standards required for export to the United States.

* A collection of major meat policy developments starting in January 2011 is available at: http://www.fao.org/economic/est/est-commodities/commodity-policy-archive/en/?groupANDcommodity=Meat

DAIRY: MAJOR POLICY DEVELOPMENTS MID-MAY TO MID-SEPTEMBER 2016*

COUNTRY	PRODUCT	DATE	POLICY CATEGORY/INSTRUMENT	DESCRIPTION
European Union	Dairy products	Jun-16	State Market intervention	Prolonged the intervention period for purchasing skimmed milk powder (SMP) and increased the ceiling to 350 000 tonnes – for acquisition at a fixed price of 169.8 EUR/100 kg. Allocated EUR 420 million for targeted aid to the livestock sector, with the option of 100 percent top-up using national funds. Endorsed the possibility of voluntary agreements between farmers to limit milk supply for a 6-month period, starting from 13 April 2016 (based on Article 222 of the Common Market Organization). Increased funds for food promotion programmes, including the provision of milk to school children in Syria.
India	Dairy products	Jun-16	Import ban extended	Extended the ban on import of milk and milk products from China for a further year until June 2017.
Jordan	Dairy products	Jun-15	Product specification	Banned the use of partially hydrogenated oils in dairy products. By the end of 2016, domestic production and imports of these products will be eliminated.
Russian Federation	Dairy products	Jul-16	Import ban extended	Signed a decree to extend the ban on various agri-food imports, including cheese, milk and most types of dairy products originating in Australia, Canada, the European Union, Norway and the United States.
Turkey	Dairy products	Jul-16	State Market intervention	Planned to grant 11.6 billion TL ($3.87billion) in agricultural subsidies in 2016 to livestock producers, including dairy farmers.
United States	Cheese	Aug-16	State Market Intervention	Announced plans to purchase approximately 5 000 tonnes of cheese from private inventories for distribution to food banks and charitable organizations, with the aim of supporting dairy product prices.

* A collection of major dairy policy developments starting in January 2012 is available at: http://www.fao.org/economic/est/est-commodities/commodity-policy-archive/en/?groupANDcommodity=Milk,%20Dairy%20products

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NOTES

General

- FAO estimates and forecasts are based on official and unofficial sources.
- Unless otherwise stated, all charts and tables refer to FAO data as source.
- Estimates of world imports and exports may not always match, mainly because shipments and deliveries do not necessarily occur in the same marketing year.
- Tonnes refer to metric tonnes.
- All totals are computed from unrounded data.
- Regional totals may include estimates for countries not listed. The countries shown in the tables were chosen based on their importance of either production or trade in each region. The totals shown for Central America include countries in the Caribbean.
- Estimates for China also include those for the Taiwan Province, Hong Kong SAR and Macao SAR, unless otherwise stated.
- Up to 2012/13, the European Union includes 27 member states. From 2013/14, the European Union includes 28 member states.
- '-' means nil or negligible.
- Cereals include wheat, rice and coarse grains. Coarse grains include maize, barley, sorghum, millet, rye, oats and NES (not elsewhere specified).

Production

- **Cereals**: Data refer to the calendar year in which the whole harvest or bulk of harvest takes place.

Utilization

- **Cereals**: Data are on individual country's marketing year basis.

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**: The time reference period is October/September, unless otherwise stated.

Stocks

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

Price indices

- The FAO price indices are calculated using the Laspeyres formula; the weights used are based on the average export value of each commodity for the 2002-2004 period.

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 54 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 1 945 in 2011). The LDCs group currently includes 48 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.

APPENDIX TABLE 1(A): **CEREAL STATISTICS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**1 105.0**	**1 118.1**	**1 125.8**	**178.8**	**203.3**	**191.6**	**61.2**	**55.0**	**55.7**
Bangladesh	37.8	39.0	38.9	3.9	5.3	5.4	-	-	-
China	487.1	508.5	500.4	29.2	38.9	28.3	0.9	0.8	0.8
India	242.6	228.9	244.8	0.1	0.6	1.3	20.5	12.0	13.0
Indonesia	63.1	65.4	64.5	11.5	14.1	13.6	0.1	0.4	0.4
Iran, Islamic Republic of	15.4	17.2	18.3	13.8	11.9	9.8	-	0.2	0.2
Iraq	4.4	4.3	4.2	4.8	4.2	4.4	-	-	-
Japan	8.9	8.8	8.9	24.2	23.4	24.3	0.3	0.2	0.2
Kazakhstan	15.5	17.8	18.7	0.3	0.2	0.2	7.4	7.6	7.7
Korea, Republic of	4.4	4.6	4.5	14.3	15.0	14.9	0.1	0.1	0.1
Myanmar	18.6	18.4	18.8	0.3	0.4	0.3	1.9	2.2	2.1
Pakistan	36.3	37.4	37.9	0.5	0.4	0.4	4.7	5.0	5.4
Philippines	19.7	18.4	19.7	5.9	6.6	6.7	-	-	-
Saudi Arabia	1.0	0.4	0.4	15.8	18.4	18.6	-	-	-
Thailand	28.8	23.8	24.9	2.9	5.1	4.6	9.6	10.3	9.7
Turkey	34.2	38.2	34.5	6.8	6.0	7.6	3.2	4.8	4.5
Viet Nam	33.8	34.7	34.1	6.3	11.2	10.9	8.4	7.6	7.7
AFRICA	**166.0**	**168.2**	**160.0**	**78.6**	**91.4**	**94.5**	**9.8**	**8.6**	**7.4**
Algeria	4.4	4.1	3.4	11.7	13.6	13.2	-	-	-
Egypt	20.4	19.9	20.2	17.4	20.9	20.6	0.4	0.4	0.4
Ethiopia	21.6	23.1	23.3	1.3	2.8	2.3	2.2	2.5	2.1
Morocco	7.4	11.7	3.5	6.4	7.4	8.8	0.2	0.2	0.1
Nigeria	21.0	22.1	23.3	7.5	7.0	7.2	0.7	0.7	0.7
South Africa	15.8	12.6	9.9	2.8	5.7	6.9	2.3	1.0	0.8
Sudan	5.3	3.4	6.6	2.8	2.8	2.9	0.2	-	-
CENTRAL AMERICA	**41.0**	**40.3**	**43.2**	**25.9**	**32.2**	**31.0**	**1.7**	**2.1**	**1.9**
Mexico	34.5	34.6	36.5	15.1	20.3	19.7	1.5	1.9	1.7
SOUTH AMERICA	**169.7**	**186.1**	**171.1**	**28.6**	**28.7**	**30.1**	**59.3**	**76.4**	**63.6**
Argentina	48.8	54.7	63.3	0.1	0.1	0.1	27.1	31.2	36.6
Brazil	93.7	102.2	81.1	8.6	8.2	9.3	25.6	37.7	20.8
Chile	3.5	3.8	3.7	2.5	2.7	2.8	0.1	0.1	0.1
Colombia	2.9	3.0	3.3	6.6	7.6	7.0	0.1	0.1	0.1
Peru	4.2	4.4	4.3	4.5	4.8	4.8	-	-	-
Venezuela	3.1	2.5	2.5	4.6	3.8	4.7	-	0.1	0.1
NORTH AMERICA	**464.8**	**482.5**	**527.6**	**10.3**	**9.5**	**10.0**	**99.5**	**107.0**	**115.0**
Canada	56.5	53.3	55.2	1.6	2.3	2.3	26.6	26.7	25.8
United States of America	408.2	429.2	472.3	8.8	7.2	7.8	72.8	80.3	89.2
EUROPE	**474.2**	**497.1**	**498.3**	**23.7**	**27.3**	**25.8**	**96.3**	**123.0**	**115.5**
European Union	305.0	312.2	301.5	19.0	22.5	21.1	39.0	46.9	36.6
Russian Federation	87.1	102.1	110.4	1.1	1.1	0.9	24.0	33.6	38.8
Serbia	8.4	8.3	8.3	0.1	0.1	0.1	2.3	2.5	2.8
Ukraine	57.5	59.9	62.6	0.2	0.2	0.2	30.2	39.2	36.6
OCEANIA	**37.7**	**38.4**	**43.0**	**1.6**	**1.7**	**1.8**	**25.8**	**22.0**	**25.7**
Australia	36.8	37.5	42.1	0.2	0.2	0.2	25.8	22.0	25.7
WORLD	**2 458.4**	**2 530.7**	**2 569.0**	**347.6**	**394.1**	**384.8**	**353.6**	**394.1**	**384.8**
Developing countries	1 426.1	1 457.6	1 446.4	274.7	315.7	305.7	121.1	132.2	119.0
Developed countries	1 032.3	1 073.1	1 122.6	72.8	78.4	79.1	232.4	261.8	265.8
LIFDCs	426.1	413.8	432.9	51.3	57.6	58.5	27.2	18.6	19.2
LDCs	164.2	165.0	168.6	30.0	34.4	34.7	9.4	9.6	8.9

APPENDIX TABLE 1(B): **CEREAL STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	2013-2015 average	2016 estim.	2017 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**1 200.0**	**1 256.7**	**1 270.7**	**394.0**	**424.5**	**417.2**	**157.3**	**157.4**	**157.7**
Bangladesh	41.6	44.1	44.5	8.1	9.2	9.0	207.2	209.7	210.4
China	495.7	521.8	525.6	237.5	280.3	282.7	150.6	150.7	150.7
India	221.5	227.0	235.3	52.5	42.9	40.7	148.0	147.5	148.4
Indonesia	74.3	78.9	79.0	10.7	9.5	9.1	188.4	190.1	190.3
Iran, Islamic Republic of	27.5	29.0	29.2	4.6	6.4	5.1	201.7	201.3	202.0
Iraq	9.0	9.2	9.2	2.3	1.7	1.1	197.0	193.0	190.4
Japan	33.0	32.3	32.8	5.7	5.0	5.0	103.7	102.8	101.8
Kazakhstan	10.3	10.7	10.8	3.0	2.1	2.6	159.0	158.1	158.0
Korea, Republic of	18.6	19.0	19.2	3.7	4.5	4.8	131.4	127.4	125.2
Myanmar	17.3	17.0	17.1	3.0	2.4	2.3	209.6	209.3	209.3
Pakistan	32.4	33.8	33.5	5.0	5.0	4.5	147.8	148.3	148.1
Philippines	25.1	25.5	26.9	3.4	3.7	3.6	158.6	157.8	158.4
Saudi Arabia	16.0	19.1	18.7	6.0	6.8	6.9	144.7	147.8	148.3
Thailand	21.2	23.4	22.5	18.9	12.8	10.3	119.2	121.6	122.0
Turkey	37.6	39.2	39.5	5.2	5.6	3.9	238.3	238.3	238.8
Viet Nam	32.0	37.2	37.5	4.3	4.7	4.6	179.0	179.5	180.0
AFRICA	**232.1**	**246.6**	**250.2**	**41.4**	**48.1**	**42.6**	**147.8**	**147.9**	**147.9**
Algeria	15.3	16.9	17.1	4.8	6.3	5.8	231.8	231.2	231.0
Egypt	37.8	39.9	40.5	6.0	6.6	6.5	275.2	274.9	274.7
Ethiopia	20.5	22.1	22.9	2.1	2.8	2.8	168.8	171.8	172.7
Morocco	13.5	15.4	14.7	4.7	8.7	6.1	254.3	256.8	256.5
Nigeria	27.7	29.0	29.7	1.6	1.3	1.3	120.3	117.8	119.4
South Africa	16.0	16.6	16.4	2.5	3.3	2.4	168.5	167.4	167.9
Sudan	7.6	7.2	8.4	1.2	1.4	2.0	171.5	164.0	174.1
CENTRAL AMERICA	**65.0**	**69.5**	**72.8**	**6.4**	**7.7**	**7.5**	**157.3**	**158.2**	**159.2**
Mexico	48.1	52.1	54.9	3.2	3.9	3.6	184.0	185.3	184.2
SOUTH AMERICA	**135.5**	**146.0**	**143.8**	**26.6**	**29.4**	**23.9**	**119.1**	**117.9**	**117.6**
Argentina	20.5	26.0	26.9	6.1	7.9	7.9	134.0	134.8	134.7
Brazil	75.1	78.4	75.0	11.1	9.8	4.7	112.6	110.2	110.1
Chile	6.1	6.8	6.9	0.8	0.9	0.7	150.4	150.2	150.3
Colombia	9.6	10.3	10.4	0.8	0.9	1.1	99.7	102.7	103.6
Peru	8.2	8.5	8.7	1.5	1.5	1.6	148.8	149.9	150.1
Venezuela	7.5	7.0	7.2	1.2	0.7	0.6	134.6	125.7	125.2
NORTH AMERICA	**365.2**	**377.7**	**397.9**	**66.1**	**84.2**	**104.9**	**109.0**	**109.1**	**109.7**
Canada	29.1	29.7	30.4	11.3	8.4	8.3	96.2	96.5	97.1
United States of America	336.1	348.1	367.5	54.9	75.7	96.6	110.4	110.5	111.1
EUROPE	**402.4**	**407.6**	**407.7**	**50.1**	**54.2**	**54.9**	**136.1**	**135.9**	**135.8**
European Union	283.7	289.6	289.3	30.0	34.1	30.6	136.6	136.1	135.9
Russian Federation	66.4	69.5	69.9	7.8	9.3	12.0	127.0	128.2	128.3
Serbia	6.3	5.9	5.7	0.7	0.7	0.6	161.1	163.4	163.6
Ukraine	27.5	25.1	25.5	7.3	5.3	6.0	156.4	154.6	154.8
OCEANIA	**15.4**	**16.0**	**17.1**	**6.8**	**7.5**	**8.9**	**91.1**	**91.2**	**91.0**
Australia	13.1	13.6	14.7	6.3	6.9	8.3	98.6	99.0	99.2
WORLD	**2 415.7**	**2 520.1**	**2 560.2**	**591.4**	**655.5**	**659.9**	**148.7**	**148.8**	**149.0**
Developing countries	1 549.1	1 634.4	1 652.6	451.4	491.9	473.4	153.6	153.6	153.8
Developed countries	866.6	885.7	907.7	140.0	163.6	186.5	128.5	128.3	128.4
LIFDCs	448.0	463.2	474.8	90.5	81.8	77.7	146.4	146.2	146.6
LDCs	183.0	191.5	194.8	35.1	35.8	34.2	152.9	153.6	153.5

APPENDIX TABLE 2(A): **WHEAT STATISTICS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**313.0**	**317.1**	**321.8**	**73.1**	**79.7**	**80.1**	**18.9**	**15.6**	**16.1**
Bangladesh	1.2	1.4	1.4	2.8	4.4	4.4	-	-	-
China	123.0	130.2	128.6	5.7	5.3	5.5	0.4	0.2	0.3
of which Taiwan Prov.	-	-	-	1.4	1.4	1.5	-	-	-
India	94.7	86.5	93.5	0.1	0.4	1.0	5.2	0.8	1.0
Indonesia	-	-	-	7.4	9.7	10.0	0.1	0.1	0.1
Iran, Islamic Republic of	9.6	11.5	12.5	5.8	3.3	2.2	-	0.2	0.2
Iraq	3.1	3.2	3.0	3.4	3.0	3.0	-	-	-
Japan	0.8	1.0	1.0	6.0	5.5	6.0	0.2	0.2	0.2
Kazakhstan	12.3	13.7	14.5	0.2	0.1	0.1	6.9	6.9	7.0
Korea, Republic of	-	-	-	4.4	4.3	4.4	0.1	0.1	0.1
Pakistan	24.6	25.1	25.5	0.4	0.1	0.1	0.7	0.6	0.9
Philippines	-	-	-	4.0	4.7	4.9	-	-	-
Saudi Arabia	0.6	-	-	3.0	3.3	3.8	-	-	-
Thailand	-	-	-	2.4	4.7	4.2	-	-	-
Turkey	20.4	22.6	20.5	4.6	4.0	5.0	3.1	4.6	4.4
AFRICA	**26.1**	**28.1**	**22.5**	**43.8**	**50.7**	**50.3**	**1.3**	**1.0**	**0.9**
Algeria	2.9	2.8	2.2	7.3	8.2	8.0	-	-	-
Egypt	9.2	9.0	9.0	10.1	12.2	12.0	-	-	-
Ethiopia	3.9	4.2	4.3	1.0	2.5	2.0	-	-	-
Morocco	5.3	8.0	2.7	4.1	4.5	5.0	0.2	0.2	0.1
Nigeria	0.1	0.1	0.1	4.4	4.5	4.5	0.5	0.5	0.5
South Africa	1.8	1.4	1.7	1.7	2.4	2.3	0.3	0.1	0.1
Tunisia	1.4	0.9	1.0	1.7	2.0	2.0	0.1	0.1	0.1
CENTRAL AMERICA	**3.4**	**3.7**	**3.8**	**8.4**	**8.9**	**8.4**	**1.1**	**1.4**	**1.3**
Cuba	-	-	-	0.8	0.8	0.8	-	-	-
Mexico	3.4	3.7	3.8	4.4	4.8	4.4	1.0	1.3	1.2
SOUTH AMERICA	**20.0**	**20.6**	**25.2**	**14.0**	**12.6**	**12.7**	**7.0**	**11.3**	**11.3**
Argentina	10.4	11.3	15.0	-	-	-	4.2	8.6	9.0
Brazil	5.5	5.4	6.2	6.7	5.9	6.0	1.2	1.1	1.1
Chile	1.3	1.5	1.7	0.8	0.8	0.7	-	-	-
Colombia	-	-	-	1.6	1.8	1.7	-	0.1	0.1
Peru	0.2	0.2	0.2	1.8	1.7	1.7	-	-	-
Venezuela	-	-	-	1.7	1.4	1.6	-	-	-
NORTH AMERICA	**89.6**	**83.4**	**93.6**	**3.7**	**2.7**	**3.4**	**49.1**	**43.6**	**46.5**
Canada	31.4	27.6	30.5	0.2	0.3	0.3	21.8	22.1	21.5
United States of America	58.2	55.8	63.2	3.5	2.4	3.1	27.3	21.6	25.0
EUROPE	**222.7**	**256.3**	**247.1**	**7.4**	**9.4**	**9.2**	**56.4**	**76.1**	**70.0**
European Union	144.4	160.5	144.0	4.9	6.6	6.5	28.8	33.4	25.5
Russian Federation	49.8	61.8	69.5	0.5	0.7	0.6	17.2	24.3	29.5
Ukraine	20.7	26.5	25.6	-	0.1	0.1	9.4	17.4	14.0
OCEANIA	**24.3**	**24.5**	**28.4**	**0.9**	**0.9**	**0.9**	**18.8**	**15.8**	**19.0**
Australia	24.0	24.2	28.1	-	-	-	18.8	15.8	19.0
WORLD	**699.0**	**733.8**	**742.4**	**151.3**	**164.9**	**165.0**	**152.5**	**164.9**	**165.0**
Developing countries	335.4	341.1	343.4	124.0	136.1	135.8	20.0	21.2	21.4
Developed countries	363.6	392.7	399.0	27.3	28.9	29.2	132.6	143.7	143.6
LIFDCs	119.7	111.1	117.3	29.4	35.5	34.9	6.6	2.1	2.3
LDCs	13.5	13.2	12.9	17.3	21.8	21.1	0.2	0.1	0.1

APPENDIX TABLE 2(B): **WHEAT STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	2013-2015 average	2016 *estim.*	2017 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*
	(. . . . . million tonnes . . . . . .)						*(. . . . . Kg/year . . . . . .)*		
ASIA	**363.4**	**369.8**	**378.9**	**112.1**	**132.4**	**138.9**	**64.7**	**65.2**	**65.4**
Bangladesh	4.2	5.1	5.5	0.7	1.6	1.8	23.1	24.1	24.7
China	124.8	119.5	121.9	54.7	75.7	87.5	63.9	64.0	64.0
of which Taiwan Prov.	1.3	1.4	1.5	0.5	0.5	0.5	45.3	45.8	45.7
India	87.4	89.8	94.2	25.1	23.0	22.0	59.1	59.5	59.6
Indonesia	7.2	8.7	9.9	1.0	0.9	0.9	24.2	25.6	25.7
Iran, Islamic Republic of	14.5	15.2	15.4	2.3	3.5	2.5	166.9	167.0	167.4
Iraq	6.3	6.6	6.7	1.8	1.6	0.9	151.0	152.4	151.8
Japan	6.6	6.6	6.7	1.0	0.5	0.7	42.3	42.9	42.7
Kazakhstan	7.5	7.5	7.4	2.8	1.6	1.8	144.7	143.3	143.2
Korea, Republic of	4.4	4.1	4.4	0.8	0.8	0.7	47.6	48.3	48.1
Pakistan	24.4	25.1	25.0	2.8	3.0	2.7	125.6	125.7	125.7
Philippines	4.0	4.9	5.0	0.6	0.6	0.5	23.1	23.3	23.5
Saudi Arabia	3.4	3.6	3.6	2.5	2.8	3.0	98.6	100.8	100.8
Thailand	2.5	4.3	4.3	0.8	1.3	1.2	15.7	16.6	16.5
Turkey	21.9	22.3	22.5	2.9	2.7	1.5	209.1	209.1	209.7
AFRICA	**67.6**	**72.2**	**72.7**	**16.8**	**22.0**	**19.3**	**50.8**	**50.7**	**50.2**
Algeria	9.6	10.3	10.5	3.4	4.4	4.1	209.8	209.9	209.9
Egypt	19.8	20.8	21.2	4.0	4.5	4.3	189.5	190.1	190.6
Ethiopia	4.8	5.5	5.6	0.5	0.8	0.8	41.2	43.2	43.2
Morocco	8.9	9.9	9.4	3.6	6.5	4.7	202.3	203.6	203.9
Nigeria	3.9	4.0	4.0	0.2	0.2	0.2	20.3	19.6	19.1
South Africa	3.2	3.2	3.4	0.5	0.5	0.7	57.7	57.3	58.7
Tunisia	3.0	3.0	3.0	0.8	0.6	0.5	211.1	211.0	211.0
CENTRAL AMERICA	**10.7**	**10.9**	**11.0**	**1.3**	**1.6**	**1.6**	**44.0**	**44.1**	**44.5**
Cuba	0.8	0.8	0.8	-	0.1	0.1	55.5	55.3	55.3
Mexico	6.8	7.0	7.1	0.7	0.8	0.8	47.5	48.0	48.6
SOUTH AMERICA	**26.1**	**26.4**	**26.7**	**6.3**	**5.0**	**5.1**	**59.6**	**59.0**	**58.6**
Argentina	5.5	5.7	6.0	2.4	2.0	2.1	117.2	117.5	117.5
Brazil	11.0	11.1	11.2	1.6	0.8	0.8	51.6	51.5	51.3
Chile	2.3	2.4	2.4	0.1	0.1	0.2	120.3	120.2	120.3
Colombia	1.5	1.5	1.5	0.3	0.5	0.5	28.2	28.2	28.1
Peru	1.9	2.0	2.0	0.5	0.6	0.6	60.2	60.5	60.1
Venezuela	1.7	1.5	1.6	0.3	0.1	0.1	56.6	48.6	48.6
NORTH AMERICA	**43.2**	**40.3**	**46.1**	**26.2**	**30.9**	**34.6**	**81.9**	**82.2**	**82.3**
Canada	8.7	8.8	8.9	7.5	4.2	4.7	80.4	80.7	81.3
United States of America	34.5	31.6	37.2	18.7	26.7	29.9	82.0	82.4	82.4
EUROPE	**174.7**	**187.7**	**186.3**	**21.5**	**28.6**	**28.4**	**110.0**	**109.3**	**109.3**
European Union	119.4	129.8	128.8	10.4	17.2	13.2	111.9	111.0	110.9
Russian Federation	35.0	38.0	38.5	4.9	6.0	8.1	100.3	100.7	100.7
Ukraine	11.8	11.4	10.7	3.3	2.1	3.1	122.4	120.6	121.0
OCEANIA	**7.8**	**8.3**	**8.8**	**4.4**	**5.3**	**6.3**	**67.5**	**67.1**	**66.9**
Australia	6.7	7.1	7.6	4.1	4.9	5.9	79.1	79.3	79.4
WORLD	**693.5**	**715.7**	**730.5**	**188.7**	**225.8**	**234.2**	**67.2**	**67.2**	**67.2**
Developing countries	431.5	442.8	452.7	128.3	154.3	157.6	60.1	60.4	60.3
Developed countries	262.0	272.8	277.8	60.4	71.5	76.6	96.6	96.4	96.4
LIFDCs	140.1	146.1	150.8	37.0	36.8	34.0	47.5	47.6	47.5
LDCs	30.2	33.4	33.8	6.7	8.6	7.5	28.7	29.4	29.1

APPENDIX TABLE 3(A): COARSE GRAIN STATISTICS

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**345.8**	**356.6**	**353.9**	**84.1**	**102.0**	**90.1**	**6.7**	**3.9**	**3.8**
China	222.6	234.5	227.3	17.2	26.8	16.0	0.1	0.1	0.1
of which Taiwan Prov.	0.1	0.1	0.1	4.4	4.6	4.7	-	-	-
India	42.1	38.1	43.7	-	0.2	0.3	4.2	1.2	1.3
Indonesia	19.0	19.6	19.4	3.2	2.6	2.6	-	0.3	0.3
Iran, Islamic Republic of	4.3	3.9	3.9	6.6	7.6	6.5	-	-	-
Japan	0.2	0.2	0.2	17.5	17.2	17.6	-	-	-
Korea, D.P.R.	2.5	2.7	2.6	0.2	0.3	0.2	-	-	-
Korea, Republic of	0.2	0.2	0.2	9.6	10.3	10.1	-	-	-
Malaysia	0.1	0.1	0.1	3.5	3.7	3.8	-	-	-
Pakistan	5.3	5.5	5.5	0.1	0.3	0.3	-	-	-
Philippines	7.5	7.0	7.5	0.4	0.6	0.6	-	-	-
Saudi Arabia	0.4	0.4	0.4	11.4	13.7	13.2	-	-	-
Thailand	5.0	4.8	4.9	0.2	0.2	0.1	0.5	0.4	0.2
Turkey	13.3	15.1	13.4	2.0	1.8	2.3	0.1	0.1	0.1
Viet Nam	5.1	5.3	5.2	3.7	7.7	7.8	0.1	0.1	0.1
AFRICA	**121.7**	**121.2**	**117.9**	**20.5**	**27.0**	**30.0**	**8.0**	**7.0**	**6.0**
Algeria	1.5	1.3	1.2	4.3	5.2	5.1	-	-	-
Egypt	7.0	6.8	6.8	7.3	8.6	8.6	-	-	-
Ethiopia	17.6	18.8	19.0	0.1	-	-	2.2	2.5	2.1
Kenya	4.0	4.0	3.7	0.8	1.1	1.1	-	-	-
Morocco	2.1	3.7	0.8	2.4	2.9	3.8	-	-	-
Nigeria	18.1	19.2	20.2	0.2	0.2	0.2	0.2	0.3	0.3
South Africa	13.9	11.2	8.2	0.2	2.4	3.7	2.0	0.9	0.7
Sudan	5.0	2.9	6.2	0.4	0.4	0.3	0.2	-	-
Tanzania, United Rep. of	6.9	7.2	6.7	-	-	-	0.5	0.7	0.6
CENTRAL AMERICA	**35.8**	**34.9**	**37.6**	**15.3**	**21.0**	**20.1**	**0.6**	**0.6**	**0.5**
Mexico	30.9	30.8	32.5	10.1	14.9	14.6	0.5	0.6	0.5
SOUTH AMERICA	**133.3**	**148.1**	**130.0**	**13.1**	**14.2**	**15.8**	**49.2**	**61.8**	**49.3**
Argentina	37.3	42.4	47.3	-	0.1	0.1	22.5	22.1	27.1
Brazil	80.2	88.3	67.7	1.3	1.5	2.7	23.6	35.9	19.0
Chile	2.0	2.2	1.8	1.5	1.7	1.9	0.1	0.1	0.1
Colombia	1.5	1.5	1.5	4.8	5.5	5.2	0.1	0.1	0.1
Peru	1.9	2.0	1.9	2.4	2.9	2.8	-	-	-
Venezuela	2.4	1.9	2.0	2.4	2.0	2.6	-	0.1	0.1
NORTH AMERICA	**368.7**	**393.0**	**426.4**	**5.5**	**5.6**	**5.5**	**47.1**	**59.9**	**64.8**
Canada	25.2	25.7	24.8	1.0	1.6	1.6	4.8	4.6	4.3
United States of America	343.5	367.2	401.7	4.5	4.0	3.9	42.3	55.3	60.6
EUROPE	**248.9**	**238.2**	**248.6**	**14.1**	**15.5**	**14.1**	**39.4**	**46.5**	**45.2**
European Union	158.7	150.0	155.7	12.5	14.1	12.7	9.9	13.2	10.8
Russian Federation	36.5	39.5	40.1	0.3	0.2	0.1	6.6	9.1	9.1
Serbia	6.1	5.9	5.9	-	-	-	1.6	1.7	2.0
Ukraine	36.7	33.4	36.9	0.1	-	-	20.8	21.8	22.6
OCEANIA	**12.8**	**13.4**	**14.4**	**0.2**	**0.3**	**0.3**	**6.6**	**6.0**	**6.4**
Australia	12.2	12.9	13.8	-	-	-	6.6	6.0	6.4
WORLD	**1 266.9**	**1 305.4**	**1 328.8**	**152.9**	**185.6**	**176.0**	**157.6**	**185.8**	**176.0**
Developing countries	616.5	642.4	623.8	112.9	141.9	132.1	61.9	71.7	58.3
Developed countries	650.5	663.0	705.0	40.0	43.8	43.9	95.7	114.0	117.7
LIFDCs	146.5	143.5	152.1	6.5	8.0	8.7	9.4	6.3	6.0
LDCs	77.8	78.0	80.9	3.0	3.7	4.3	6.3	6.4	5.7

APPENDIX TABLE 3(B): **COARSE GRAIN STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	2013-2015 average	2016 estim.	2017 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**414.2**	**452.3**	**453.2**	**122.2**	**131.9**	**118.9**	**14.2**	**13.9**	**14.0**
China	232.4	256.7	256.4	97.6	106.6	93.4	9.7	9.6	9.5
of which Taiwan Prov.	4.4	4.7	4.7	0.3	0.2	0.2	6.8	7.1	7.1
India	38.4	39.5	42.0	3.4	1.7	2.2	19.9	18.8	19.5
Indonesia	21.7	23.4	22.1	2.9	2.0	1.7	29.2	29.3	29.1
Iran, Islamic Republic of	10.1	11.0	11.0	1.6	2.5	2.2	1.3	1.3	1.3
Japan	18.0	17.2	17.7	1.1	1.1	1.1	10.1	10.0	10.0
Korea, D.P.R.	2.6	2.9	2.5	-	0.2	0.4	81.7	86.4	81.6
Korea, Republic of	9.7	10.4	10.3	1.7	2.1	2.1	4.3	4.3	4.3
Malaysia	3.5	3.7	3.9	0.1	0.1	0.1	1.6	1.5	1.5
Pakistan	5.3	6.0	5.8	1.5	1.1	1.0	10.5	10.9	10.8
Philippines	7.8	7.9	8.1	0.5	0.4	0.4	17.9	18.1	18.0
Saudi Arabia	11.3	14.1	13.7	3.3	3.7	3.6	3.2	3.0	3.0
Thailand	4.6	4.4	4.7	0.4	0.8	0.9	2.8	2.7	2.7
Turkey	15.0	16.2	16.2	2.2	2.8	2.3	19.9	19.9	19.6
Viet Nam	8.6	12.9	12.9	0.7	0.9	0.9	5.7	5.6	5.7
AFRICA	**133.0**	**141.6**	**144.0**	**19.3**	**21.1**	**18.5**	**72.3**	**72.4**	**72.8**
Algeria	5.5	6.5	6.5	1.4	1.8	1.7	19.1	18.7	18.3
Egypt	14.2	15.3	15.4	1.4	1.6	1.6	46.7	46.4	45.5
Ethiopia	15.4	16.3	16.9	1.6	2.0	2.0	125.1	125.5	126.2
Kenya	4.5	4.8	4.8	0.7	0.8	0.6	86.7	87.8	87.2
Morocco	4.6	5.5	5.3	1.1	2.2	1.4	50.9	52.5	51.8
Nigeria	18.0	19.4	20.2	0.5	0.5	0.5	70.6	71.0	73.1
South Africa	11.8	12.4	12.1	1.7	2.8	1.6	93.2	93.1	93.1
Sudan	4.9	4.4	5.7	0.5	0.2	1.0	102.1	96.3	109.4
Tanzania, United Rep. of	6.1	6.6	6.4	1.2	1.5	1.3	87.8	87.8	87.6
CENTRAL AMERICA	**50.5**	**54.5**	**57.6**	**4.6**	**5.7**	**5.4**	**95.8**	**96.4**	**96.8**
Mexico	40.4	44.3	47.0	2.5	3.1	2.8	130.1	130.9	129.3
SOUTH AMERICA	**94.3**	**104.5**	**101.9**	**18.2**	**21.9**	**16.9**	**26.6**	**27.0**	**26.9**
Argentina	14.5	19.8	20.4	3.6	5.5	5.6	7.2	7.1	7.0
Brazil	55.9	59.5	56.0	8.6	8.4	3.7	24.5	24.9	24.9
Chile	3.6	4.2	4.2	0.6	0.7	0.5	18.6	18.2	18.0
Colombia	6.7	7.2	7.1	0.3	0.3	0.3	41.2	43.1	42.8
Peru	4.0	4.2	4.3	0.6	0.6	0.6	24.5	24.2	24.2
Venezuela	4.7	4.3	4.6	0.7	0.4	0.4	51.4	50.3	49.7
NORTH AMERICA	**317.6**	**333.4**	**347.2**	**38.6**	**51.7**	**68.3**	**17.9**	**17.8**	**17.9**
Canada	20.0	20.5	21.1	3.7	4.2	3.6	4.7	4.7	4.7
United States of America	297.6	313.0	326.1	34.9	47.5	64.8	19.3	19.3	19.4
EUROPE	**223.5**	**215.5**	**216.8**	**27.8**	**24.8**	**25.5**	**21.0**	**21.3**	**21.0**
European Union	161.2	156.6	157.1	19.1	16.4	16.7	19.3	19.7	19.3
Russian Federation	30.7	30.8	30.7	2.8	3.2	3.7	21.9	22.4	22.4
Serbia	4.6	4.2	3.9	0.4	0.5	0.5	21.9	22.8	22.9
Ukraine	15.6	13.6	14.6	4.1	3.2	2.9	31.1	30.9	30.7
OCEANIA	**6.9**	**7.1**	**7.6**	**2.2**	**1.9**	**2.5**	**8.2**	**8.2**	**8.1**
Australia	6.1	6.2	6.8	2.1	1.8	2.4	9.7	9.6	9.5
WORLD	**1 239.9**	**1 309.0**	**1 328.4**	**233.1**	**259.0**	**256.1**	**27.2**	**27.3**	**27.6**
Developing countries	654.6	715.1	718.4	159.6	173.2	152.6	28.8	28.9	29.2
Developed countries	585.3	593.9	610.0	73.5	85.8	103.4	20.7	20.8	20.7
LIFDCs	143.6	149.2	153.4	17.2	14.5	15.5	40.0	39.9	40.5
LDCs	74.0	77.2	79.3	13.0	11.9	11.8	56.6	56.9	57.4

APPENDIX TABLE 4(A): **MAIZE STATISTICS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**298.5**	**309.0**	**306.0**	**58.3**	**67.3**	**62.3**	**5.5**	**2.6**	**2.7**
China	213.3	224.6	217.0	8.1	9.6	6.1	-	-	-
of which Taiwan Prov.	-	-	-	4.2	4.5	4.5	-	-	-
India	23.6	21.8	26.0	-	0.2	0.3	3.5	0.6	0.8
Indonesia	19.0	19.6	19.4	3.1	2.5	2.5	-	0.3	0.3
Iran, Islamic Republic of	1.5	0.9	0.9	5.2	6.0	5.0	-	-	-
Japan	-	-	-	14.7	15.1	15.0	-	-	-
Korea, D.P.R.	2.4	2.5	2.5	0.2	0.3	0.2	-	-	-
Korea, Republic of	0.1	0.1	0.1	9.4	10.2	10.0	-	-	-
Malaysia	0.1	0.1	0.1	3.5	3.7	3.8	-	-	-
Pakistan	4.7	4.9	4.9	-	-	-	-	-	-
Philippines	7.5	7.0	7.5	0.4	0.6	0.6	-	-	-
Thailand	4.9	4.6	4.7	0.1	0.1	0.1	0.5	0.4	0.2
Turkey	5.5	6.4	6.0	1.5	1.5	1.5	0.1	0.1	0.1
Viet Nam	5.1	5.3	5.2	3.6	7.7	7.7	0.1	0.1	0.1
AFRICA	**72.3**	**70.9**	**66.6**	**17.3**	**22.5**	**24.9**	**5.4**	**4.5**	**3.5**
Algeria	-	-	-	3.7	4.4	4.2	-	-	-
Egypt	6.2	6.0	6.0	7.2	8.5	8.5	-	-	-
Ethiopia	6.6	7.2	7.2	-	-	-	0.8	0.8	0.6
Kenya	3.6	3.6	3.3	0.6	1.0	1.0	-	-	-
Morocco	0.2	0.2	0.2	2.0	2.0	2.2	-	-	-
Nigeria	10.0	10.8	11.5	0.2	0.2	0.2	0.1	0.2	0.2
South Africa	13.4	10.6	7.7	0.1	2.3	3.5	2.0	0.9	0.7
Tanzania, United Rep. of	5.7	6.0	5.5	-	-	-	0.5	0.7	0.6
CENTRAL AMERICA	**27.3**	**28.5**	**30.4**	**14.1**	**19.8**	**18.9**	**0.6**	**0.6**	**0.5**
Mexico	22.9	24.7	25.7	8.9	13.7	13.4	0.5	0.6	0.5
SOUTH AMERICA	**119.4**	**134.4**	**118.0**	**11.2**	**12.4**	**13.9**	**44.4**	**58.1**	**46.0**
Argentina	28.8	33.8	39.8	-	-	-	17.9	18.6	24.0
Brazil	77.2	85.5	65.5	0.8	0.7	2.0	23.5	35.9	19.0
Chile	1.4	1.5	1.1	1.2	1.5	1.6	-	-	-
Colombia	1.5	1.5	1.5	4.1	5.0	4.6	0.1	0.1	0.1
Peru	1.6	1.8	1.6	2.3	2.8	2.7	-	-	-
Venezuela	2.3	1.8	1.9	2.4	2.0	2.6	-	0.1	0.1
NORTH AMERICA	**341.4**	**359.0**	**395.7**	**2.8**	**3.1**	**2.6**	**38.2**	**47.4**	**55.0**
Canada	12.9	13.6	12.3	0.9	1.4	1.4	1.4	1.5	1.0
United States of America	328.5	345.5	383.4	1.9	1.7	1.2	36.8	45.9	54.0
EUROPE	**114.0**	**103.5**	**111.9**	**12.6**	**14.0**	**12.7**	**25.3**	**26.5**	**27.8**
European Union	67.0	58.0	63.0	11.8	13.2	12.0	2.7	2.1	2.5
Russian Federation	10.4	13.2	13.5	0.1	0.1	-	3.0	5.0	4.5
Serbia	5.7	5.5	5.5	-	-	-	1.6	1.7	2.0
Ukraine	26.8	23.3	26.2	-	-	-	17.5	17.2	18.3
OCEANIA	**0.6**	**0.7**	**0.6**	**0.1**	**0.2**	**0.2**	**0.1**	**-**	**0.1**
WORLD	**973.6**	**1 006.0**	**1 029.3**	**116.4**	**139.2**	**135.5**	**119.5**	**139.7**	**135.5**
Developing countries	502.2	530.0	511.1	84.4	102.8	99.6	53.8	64.8	52.0
Developed countries	471.4	476.0	518.2	32.0	36.5	35.9	65.7	74.9	83.6
LIFDCs	81.2	80.8	84.2	5.1	6.5	7.3	6.2	3.2	3.1
LDCs	42.6	43.5	42.8	2.3	3.1	3.7	3.9	3.9	3.4

APPENDIX TABLE 4(B): **MAIZE STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	2013-2015 average	2016 estim.	2017 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**342.2**	**372.2**	**378.4**	**109.4**	**118.5**	**106.4**	**8.6**	**8.5**	**8.5**
China	213.7	230.6	236.1	95.1	103.7	91.2	6.3	6.1	6.1
of which Taiwan Prov.	4.3	4.5	4.5	0.3	0.2	0.2	5.3	5.6	5.6
India	20.1	22.8	24.5	1.7	1.0	1.8	7.0	7.1	7.2
Indonesia	21.6	23.3	22.1	2.9	2.0	1.7	28.8	28.9	28.8
Iran, Islamic Republic of	6.2	6.5	6.4	0.9	1.5	1.3	1.0	0.9	0.9
Japan	14.8	14.8	15.0	0.6	0.8	0.8	7.6	7.5	7.5
Korea, D.P.R.	2.5	2.7	2.4	-	0.2	0.4	79.3	81.9	79.1
Korea, Republic of	9.5	10.2	10.1	1.7	2.1	2.1	1.9	1.9	1.9
Malaysia	3.5	3.7	3.9	0.1	0.1	0.1	1.6	1.5	1.5
Pakistan	4.7	5.2	5.0	1.5	1.1	1.0	8.3	7.8	7.8
Philippines	7.8	7.8	8.1	0.5	0.4	0.4	17.9	18.0	18.0
Thailand	4.4	4.2	4.5	0.4	0.8	0.9	1.3	1.3	1.2
Turkey	6.7	7.6	7.6	0.8	1.2	1.0	16.1	16.1	16.0
Viet Nam	8.5	12.9	12.8	0.7	0.9	0.9	5.6	5.6	5.7
AFRICA	**82.9**	**89.5**	**89.9**	**13.4**	**14.5**	**11.9**	**39.8**	**40.0**	**39.9**
Algeria	3.4	4.2	4.3	0.8	1.4	1.3	3.6	3.5	3.5
Egypt	13.3	14.4	14.5	1.3	1.5	1.5	43.4	43.2	42.3
Ethiopia	5.9	6.4	6.6	0.4	0.5	0.5	42.5	42.8	42.7
Kenya	4.0	4.2	4.3	0.5	0.6	0.4	79.6	79.5	79.6
Morocco	2.1	2.3	2.4	0.7	0.7	0.6	10.5	10.2	10.1
Nigeria	10.0	11.1	11.5	0.3	0.3	0.3	33.0	33.2	34.9
South Africa	11.1	11.7	11.5	1.5	2.5	1.4	89.2	89.0	89.1
Tanzania, United Rep. of	5.0	5.4	5.2	0.9	1.3	1.1	68.3	68.5	68.5
CENTRAL AMERICA	**41.0**	**47.0**	**49.2**	**4.1**	**5.3**	**5.0**	**94.6**	**95.0**	**95.2**
Mexico	31.4	37.1	38.9	2.0	2.8	2.5	129.3	129.5	127.9
SOUTH AMERICA	**83.1**	**92.0**	**90.3**	**15.4**	**18.1**	**13.2**	**25.2**	**25.5**	**25.4**
Argentina	10.6	14.8	15.8	2.4	4.0	4.0	7.0	6.9	6.8
Brazil	52.5	55.9	53.0	8.2	8.0	3.5	23.5	23.8	23.9
Chile	2.3	2.9	2.9	0.5	0.6	0.4	16.5	16.2	16.0
Colombia	5.7	6.1	6.1	0.3	0.3	0.3	39.7	41.6	41.3
Peru	3.6	3.9	3.9	0.6	0.6	0.5	18.2	18.2	18.3
Venezuela	4.5	4.2	4.5	0.6	0.4	0.4	50.9	49.8	49.2
NORTH AMERICA	**298.4**	**311.9**	**325.8**	**33.6**	**45.5**	**61.8**	**14.8**	**14.7**	**14.9**
Canada	12.5	13.0	13.4	1.5	2.0	1.3	3.2	3.2	3.2
United States of America	285.9	298.9	312.4	32.0	43.6	60.5	16.0	16.0	16.2
EUROPE	**100.8**	**96.9**	**97.7**	**12.8**	**11.4**	**10.6**	**8.3**	**8.4**	**8.4**
European Union	75.9	73.1	72.5	8.3	7.0	7.0	9.8	9.9	9.9
Russian Federation	7.4	8.3	9.1	0.6	0.8	0.9	1.2	1.4	1.4
Serbia	4.1	3.8	3.5	0.4	0.5	0.5	20.2	21.1	21.2
Ukraine	8.9	7.8	8.8	2.9	2.4	1.6	11.0	10.9	11.0
OCEANIA	**0.6**	**0.8**	**0.7**	**0.1**	**0.1**	**0.1**	**2.4**	**2.4**	**2.3**
WORLD	**949.0**	**1 010.2**	**1 032.0**	**188.8**	**213.3**	**209.1**	**17.1**	**17.4**	**17.4**
Developing countries	519.8	570.5	577.4	139.6	151.6	132.8	18.3	18.5	18.5
Developed countries	429.2	439.7	454.6	49.2	61.7	76.3	12.5	12.6	12.6
LIFDCs	79.9	86.1	87.5	9.9	8.5	8.9	19.2	19.7	19.7
LDCs	40.8	43.7	43.8	8.8	7.8	6.9	27.6	28.0	27.9

APPENDIX TABLE 5(A): **BARLEY STATISTICS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**19.6**	**21.9**	**20.4**	**19.1**	**23.5**	**20.7**	**0.9**	**1.0**	**0.8**
China	1.7	2.0	2.1	4.8	7.6	4.6	-	-	-
India	1.7	1.6	1.5	-	-	-	0.5	0.4	0.3
Iran, Islamic Republic of	2.8	3.0	3.0	1.4	1.6	1.5	-	-	-
Iraq	0.8	0.8	0.8	0.1	0.1	0.1	-	-	-
Japan	0.2	0.2	0.2	1.3	1.1	1.3	-	-	-
Kazakhstan	2.2	2.7	2.7	-	-	-	0.4	0.6	0.5
Saudi Arabia	-	-	-	8.7	10.0	9.7	-	-	-
Syria	0.8	1.0	0.8	0.4	0.5	0.5	-	-	-
Turkey	7.1	8.0	6.8	0.4	0.3	0.8	-	-	-
AFRICA	**6.5**	**7.6**	**4.7**	**2.2**	**3.4**	**4.1**	**-**	**-**	**-**
Algeria	1.4	1.2	1.1	0.6	0.8	0.9	-	-	-
Ethiopia	1.9	1.9	1.9	-	-	-	-	-	-
Libya	0.1	0.1	0.1	0.5	0.9	1.0	-	-	-
Morocco	1.9	3.5	0.6	0.3	0.8	1.5	-	-	-
Tunisia	0.6	0.4	0.4	0.6	0.8	0.6	-	-	-
CENTRAL AMERICA	**0.8**	**0.8**	**0.8**	**0.1**	**0.2**	**0.2**	**-**	**-**	**-**
Mexico	0.8	0.8	0.8	0.1	0.2	0.2	-	-	-
SOUTH AMERICA	**5.1**	**5.7**	**4.9**	**0.9**	**1.0**	**1.0**	**2.8**	**2.7**	**2.5**
Argentina	4.3	4.9	4.0	-	-	-	2.7	2.6	2.4
NORTH AMERICA	**12.9**	**12.9**	**12.8**	**0.5**	**0.5**	**0.6**	**1.8**	**1.5**	**1.6**
Canada	8.5	8.2	8.7	0.1	0.1	0.1	1.5	1.3	1.3
United States of America	4.5	4.7	4.1	0.5	0.4	0.5	0.3	0.2	0.3
EUROPE	**86.1**	**89.6**	**89.1**	**0.5**	**0.6**	**0.5**	**13.3**	**19.3**	**16.8**
Belarus	1.9	1.5	1.5	-	-	-	0.1	0.1	0.1
European Union	58.3	60.8	60.0	0.1	0.3	0.2	6.8	10.8	8.0
Russian Federation	16.6	17.5	17.2	0.2	0.1	0.1	3.4	4.0	4.5
Ukraine	7.9	8.3	8.9	-	-	-	3.0	4.4	4.2
OCEANIA	**8.8**	**8.9**	**9.8**	**-**	**-**	**-**	**5.4**	**4.9**	**5.4**
Australia	8.4	8.6	9.5	-	-	-	5.4	4.9	5.4
WORLD	**139.8**	**147.4**	**142.5**	**23.3**	**29.3**	**27.0**	**24.1**	**29.4**	**27.0**
Developing countries	27.9	30.9	25.8	20.5	26.4	24.0	3.3	3.2	2.8
Developed countries	111.9	116.5	116.7	2.8	3.0	3.1	20.8	26.2	24.2
LIFDCs	5.7	5.7	5.4	0.5	0.5	0.5	0.5	0.4	0.3
LDCs	2.5	2.4	2.4	-	-	-	-	-	-

APPENDIX TABLE 5(B): **BARLEY STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	2013-2015 average	2016 *estim.*	2017 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*
	(. . . . . million tonnes . . . . . .)						*(. . . . . Kg/year . . . . . .)*		
ASIA	**37.0**	**43.8**	**39.9**	**9.1**	**10.7**	**10.3**	**0.6**	**0.6**	**0.6**
China	6.2	10.1	6.6	1.4	1.6	1.2	0.1	0.2	0.2
India	1.4	1.3	1.2	-	-	-	0.9	0.8	0.7
Iran, Islamic Republic of	4.0	4.5	4.6	0.7	1.0	0.9	0.3	0.3	0.3
Iraq	0.9	0.9	0.8	-	-	-	3.8	3.6	3.5
Japan	1.5	1.3	1.4	0.3	0.2	0.2	2.4	2.4	2.4
Kazakhstan	1.8	2.0	2.1	0.1	0.2	0.4	1.2	1.1	1.1
Saudi Arabia	8.3	10.0	9.8	3.1	3.4	3.3	0.9	0.9	0.9
Syria	1.2	1.4	1.2	0.6	0.5	0.5	14.5	15.1	15.1
Turkey	7.5	7.9	7.9	1.3	1.5	1.2	1.1	1.0	1.0
AFRICA	**8.8**	**10.0**	**9.7**	**1.6**	**2.6**	**1.7**	**3.3**	**3.4**	**3.3**
Algeria	2.0	2.1	2.1	0.6	0.4	0.4	15.5	15.1	14.9
Ethiopia	1.9	1.9	2.0	0.1	0.1	0.1	16.1	16.5	16.4
Libya	0.6	1.0	1.1	-	-	-	13.2	13.2	13.1
Morocco	2.4	3.1	2.8	0.4	1.5	0.8	40.4	42.2	41.6
Tunisia	1.1	1.1	1.1	0.4	0.4	0.3	8.2	8.0	7.9
CENTRAL AMERICA	**0.9**	**0.9**	**0.9**	**0.1**	**0.1**	**0.1**	**-**	**-**	**-**
Mexico	0.9	0.9	0.9	0.1	0.1	0.1	-	-	-
SOUTH AMERICA	**3.1**	**3.9**	**3.5**	**0.7**	**0.9**	**0.8**	**0.5**	**0.5**	**0.5**
Argentina	1.4	2.2	1.7	0.6	0.8	0.8	-	-	-
NORTH AMERICA	**10.7**	**10.5**	**10.8**	**3.1**	**3.6**	**3.7**	**0.5**	**0.5**	**0.5**
Canada	6.2	6.2	6.4	1.4	1.4	1.7	0.3	0.3	0.3
United States of America	4.5	4.3	4.4	1.8	2.2	2.0	0.6	0.5	0.5
EUROPE	**73.4**	**71.8**	**72.5**	**9.2**	**8.9**	**9.2**	**1.0**	**1.1**	**1.0**
Belarus	1.8	1.6	1.6	0.3	0.3	0.2	-	-	-
European Union	51.6	51.3	52.2	7.2	6.5	6.5	0.8	0.8	0.7
Russian Federation	13.4	13.2	12.9	0.9	1.5	1.4	1.1	1.2	1.2
Ukraine	5.0	4.1	4.3	0.7	0.4	0.8	3.3	3.3	3.4
OCEANIA	**3.7**	**3.8**	**4.1**	**1.2**	**1.2**	**1.5**	**0.2**	**0.2**	**0.2**
Australia	3.3	3.4	3.7	1.2	1.2	1.5	0.3	0.3	0.2
WORLD	**137.6**	**144.7**	**141.3**	**25.2**	**28.0**	**27.4**	**1.0**	**1.1**	**1.0**
Developing countries	44.4	53.0	48.2	9.8	11.8	9.9	1.1	1.1	1.1
Developed countries	93.2	91.7	93.2	15.3	16.2	17.6	1.0	1.0	1.0
LIFDCs	5.8	5.8	5.6	1.0	1.0	1.0	1.3	1.3	1.2
LDCs	2.5	2.4	2.5	0.2	0.2	0.2	1.8	1.9	1.9

APPENDIX TABLE 6(A): **SORGHUM STATISTICS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	**9.2**	**8.3**	**9.5**	**5.9**	**10.3**	**6.1**	**0.1**	**0.1**	**-**
China	2.8	3.1	3.4	4.2	9.5	5.1	-	-	-
India	5.4	4.4	5.4	-	-	-	0.1	0.1	-
Japan	-	-	-	1.4	0.7	0.8	-	-	-
AFRICA	**25.5**	**24.5**	**28.2**	**0.9**	**1.0**	**0.9**	**1.0**	**0.7**	**0.6**
Burkina Faso	1.8	1.4	1.7	-	-	-	0.1	-	-
Ethiopia	3.9	4.3	4.4	0.1	-	-	0.4	0.5	0.4
Nigeria	6.7	7.0	7.3	-	-	-	0.1	0.1	0.1
Sudan	4.4	2.4	5.4	0.3	0.3	0.3	0.2	-	-
CENTRAL AMERICA	**7.4**	**5.6**	**6.3**	**0.9**	**0.5**	**0.6**	**-**	**-**	**-**
Mexico	7.0	5.2	5.9	0.9	0.5	0.6	-	-	-
SOUTH AMERICA	**7.0**	**6.3**	**5.0**	**0.7**	**0.3**	**0.6**	**1.9**	**0.9**	**0.7**
Argentina	3.8	3.1	3.0	-	-	-	1.9	0.8	0.7
Brazil	2.1	2.1	1.2	-	-	-	-	-	-
Venezuela	0.1	0.1	0.1	-	-	-	-	-	-
NORTH AMERICA	**9.1**	**15.2**	**12.4**	**0.1**	**0.1**	**0.1**	**5.1**	**9.0**	**6.2**
United States of America	9.1	15.2	12.4	0.1	0.1	0.1	5.1	9.0	6.2
EUROPE	**1.1**	**1.0**	**1.0**	**0.4**	**0.2**	**0.3**	**0.1**	**0.1**	**0.1**
European Union	0.6	0.6	0.7	0.3	0.1	0.2	-	-	-
OCEANIA	**1.9**	**2.2**	**2.0**	**0.1**	**-**	**-**	**1.1**	**1.1**	**0.9**
Australia	1.9	2.2	2.0	-	-	-	1.1	1.1	0.9
WORLD	**61.2**	**63.1**	**64.5**	**9.0**	**12.5**	**8.5**	**9.2**	**11.9**	**8.5**
Developing countries	49.0	44.5	49.0	7.0	11.3	7.2	2.9	1.6	1.3
Developed countries	12.3	18.5	15.6	2.0	1.2	1.3	6.3	10.2	7.2
LIFDCs	30.6	28.4	33.2	0.8	0.8	0.7	1.0	0.7	0.6
LDCs	16.8	15.5	18.8	0.6	0.6	0.5	0.9	0.6	0.5

APPENDIX TABLE 7(A): **OTHER COARSE GRAIN STATISTICS: MILLET, RYE, OATS AND OTHER GRAINS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)								
ASIA	18.5	17.5	17.9	0.8	1.0	1.1	0.2	0.2	0.3
AFRICA	17.5	18.1	18.4	0.1	0.1	0.1	1.6	1.9	1.9
CENTRAL AMERICA	0.1	0.1	0.1	0.3	0.5	0.5	-	-	-
SOUTH AMERICA	1.8	1.8	2.0	0.2	0.4	0.3	0.1	0.1	0.1
NORTH AMERICA	5.2	5.9	5.4	2.1	1.8	2.2	2.1	2.0	2.1
EUROPE	47.7	44.0	46.6	0.6	0.7	0.6	0.7	0.6	0.6
OCEANIA	1.4	1.6	1.9	0.1	0.2	0.2	-	0.1	-
WORLD	**92.3**	**88.9**	**92.5**	**4.1**	**4.6**	**5.0**	**4.8**	**4.8**	**5.0**

APPENDIX TABLE 6(B): **SORGHUM STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	2013-2015 average	2016 estim.	2017 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**15.7**	**17.1**	**15.7**	**1.2**	**1.3**	**1.1**	**1.4**	**1.2**	**1.4**
China	7.7	11.1	8.7	0.6	0.9	0.6	0.4	0.5	0.5
India	5.4	4.4	5.4	-	-	-	4.0	3.2	3.9
Japan	1.4	0.7	0.8	0.2	0.1	0.1	-	-	-
AFRICA	**25.5**	**25.9**	**27.9**	**2.1**	**1.6**	**2.2**	**18.0**	**17.9**	**18.6**
Burkina Faso	1.7	1.4	1.7	0.1	-	-	84.2	63.8	74.9
Ethiopia	3.6	3.7	4.0	0.3	0.5	0.5	29.8	29.1	29.9
Nigeria	6.7	6.9	7.3	0.1	0.1	0.1	31.8	31.7	32.6
Sudan	4.2	3.7	4.9	0.5	0.1	0.9	89.6	80.5	93.5
CENTRAL AMERICA	**8.1**	**6.0**	**6.8**	**0.4**	**0.3**	**0.3**	**0.7**	**0.6**	**0.8**
Mexico	7.8	5.6	6.5	0.3	0.2	0.2	-	-	-
SOUTH AMERICA	**6.2**	**6.5**	**6.0**	**2.0**	**2.8**	**2.7**	**0.1**	**0.1**	**0.1**
Argentina	1.9	2.2	2.4	0.6	0.7	0.8	-	-	-
Brazil	2.1	2.1	1.4	0.4	0.4	0.2	-	-	-
Venezuela	0.2	0.1	0.1	0.1	-	0.1	-	-	-
NORTH AMERICA	**3.8**	**6.2**	**5.6**	**0.6**	**0.9**	**1.4**	**-**	**-**	**-**
United States of America	3.8	6.2	5.6	0.6	0.9	1.4	-	-	-
EUROPE	**1.3**	**1.2**	**1.2**	**0.3**	**0.4**	**0.4**	**0.3**	**0.3**	**0.2**
European Union	0.9	0.7	0.8	0.1	0.2	0.2	0.4	0.4	0.3
OCEANIA	**1.1**	**0.9**	**1.0**	**0.7**	**0.4**	**0.6**	**0.2**	**0.2**	**0.2**
Australia	1.1	0.9	1.0	0.7	0.4	0.6	-	-	-
WORLD	**61.8**	**63.8**	**64.3**	**7.3**	**7.6**	**8.7**	**3.7**	**3.6**	**3.9**
Developing countries	53.8	54.5	55.4	5.5	5.7	6.2	4.6	4.4	4.7
Developed countries	7.9	9.3	8.8	1.8	1.9	2.6	0.3	0.3	0.2
LIFDCs	30.4	29.6	32.6	2.2	1.6	2.4	10.1	9.7	10.4
LDCs	16.4	16.5	18.1	1.9	1.4	2.2	14.4	14.2	14.9

APPENDIX TABLE 7(B): **OTHER COARSE GRAIN STATISTICS: MILLET, RYE, OATS AND OTHER GRAINS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	2013-2015 average	2016 estim.	2017 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	19.3	19.3	19.2	2.5	1.4	1.1	3.6	3.5	3.5
AFRICA	15.8	16.2	16.5	2.1	2.5	2.6	11.1	11.2	11.1
CENTRAL AMERICA	0.4	0.6	0.6	-	-	-	0.5	0.8	0.8
SOUTH AMERICA	1.9	2.1	2.2	0.1	0.1	0.1	0.8	0.8	0.9
NORTH AMERICA	4.7	4.9	4.9	1.4	1.7	1.4	2.6	2.6	2.5
EUROPE	48.0	45.6	45.4	5.5	4.1	5.3	11.4	11.6	11.4
OCEANIA	1.5	1.6	1.9	0.2	0.2	0.3	5.4	5.5	5.4
WORLD	**91.6**	**90.3**	**90.8**	**11.8**	**10.0**	**10.9**	**5.3**	**5.3**	**5.2**

APPENDIX TABLE 8(A): **RICE STATISTICS**

	Production			Imports			Exports		
	2012-2014 average	2015 estim.	2016 f'cast	2013-2015 average	2016 estim.	2017 f'cast	2013-2015 average	2016 estim.	2017 f'cast
	(. . . . . million tonnes, milled equivalent . . . . . .)								
ASIA	**446.3**	**444.4**	**450.1**	**21.6**	**21.5**	**21.4**	**35.6**	**35.5**	**35.8**
Bangladesh	34.2	35.0	34.8	0.9	0.3	0.4	-	-	-
China	141.5	143.8	144.5	6.4	6.8	6.8	0.4	0.5	0.4
of which Taiwan Prov.	1.2	1.2	1.2	0.1	0.1	0.1	0.1	0.1	0.1
India	105.8	104.3	107.7	-	-	-	11.0	10.0	10.7
Indonesia	44.2	45.8	45.1	0.9	1.8	1.0	-	-	-
Iran, Islamic Republic of	1.5	1.7	1.9	1.3	1.1	1.1	-	-	-
Iraq	0.2	0.1	0.2	1.1	1.0	1.1	-	-	-
Japan	7.9	7.6	7.7	0.7	0.7	0.7	-	-	-
Korea, D.P.R.	1.8	1.3	1.6	-	0.1	0.1	-	-	-
Korea, Republic of	4.2	4.3	4.2	0.4	0.4	0.4	-	-	-
Malaysia	1.7	1.7	1.7	1.0	1.2	1.2	-	0.1	-
Myanmar	16.8	16.5	16.8	-	-	-	1.5	1.6	1.5
Pakistan	6.4	6.8	6.9	-	-	-	3.9	4.4	4.5
Philippines	12.2	11.4	12.2	1.5	1.3	1.2	-	-	-
Saudi Arabia	-	-	-	1.4	1.4	1.6	-	-	-
Sri Lanka	2.7	3.3	3.0	0.3	-	-	-	-	-
Thailand	23.8	19.0	20.1	0.3	0.3	0.3	9.1	9.9	9.5
Viet Nam	28.8	29.4	28.9	0.5	0.6	0.5	8.2	7.5	7.6
AFRICA	**18.1**	**19.0**	**19.6**	**14.3**	**13.7**	**14.2**	**0.6**	**0.6**	**0.5**
Cote d'Ívoire	0.5	0.5	0.5	1.3	1.4	1.3	-	0.1	-
Egypt	4.2	4.1	4.3	-	0.1	0.1	0.4	0.4	0.4
Madagascar	2.7	2.5	2.5	0.3	0.3	0.3	-	-	-
Nigeria	2.8	2.9	3.0	2.8	2.3	2.5	-	-	-
Senegal	0.3	0.6	0.7	1.2	1.2	1.1	-	-	-
South Africa	-	-	-	0.9	0.9	1.0	-	-	-
Tanzania, United Rep. of	1.4	1.9	2.0	0.2	0.1	0.1	-	0.1	0.1
CENTRAL AMERICA	**1.8**	**1.7**	**1.8**	**2.2**	**2.4**	**2.4**	**0.1**	**-**	**-**
Cuba	0.4	0.3	0.3	0.4	0.6	0.5	-	-	-
Mexico	0.1	0.2	0.2	0.7	0.7	0.7	-	-	-
SOUTH AMERICA	**16.5**	**17.3**	**15.9**	**1.6**	**1.9**	**1.6**	**3.1**	**3.3**	**3.0**
Argentina	1.1	1.1	1.0	-	-	-	0.4	0.6	0.5
Brazil	8.1	8.5	7.2	0.6	0.8	0.7	0.8	0.8	0.7
Peru	2.0	2.1	2.2	0.2	0.2	0.3	-	-	-
Uruguay	1.0	1.0	0.9	-	-	-	0.8	0.9	0.9
NORTH AMERICA	**6.5**	**6.1**	**7.5**	**1.1**	**1.2**	**1.2**	**3.2**	**3.5**	**3.7**
Canada	-	-	-	0.4	0.4	0.4	-	-	-
United States of America	6.5	6.1	7.5	0.7	0.8	0.8	3.2	3.5	3.7
EUROPE	**2.6**	**2.6**	**2.6**	**2.2**	**2.4**	**2.5**	**0.5**	**0.4**	**0.4**
European Union	1.8	1.8	1.8	1.6	1.9	1.9	0.2	0.2	0.2
Russian Federation	0.7	0.7	0.8	0.3	0.2	0.2	0.2	0.1	0.2
OCEANIA	**0.7**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**	**0.4**	**0.2**	**0.4**
Australia	0.6	0.5	0.2	0.1	0.2	0.2	0.4	0.2	0.4
WORLD	**492.4**	**491.5**	**497.8**	**43.4**	**43.5**	**43.8**	**43.4**	**43.5**	**43.8**
Developing countries	474.3	474.2	479.2	37.8	37.8	37.8	39.3	39.3	39.3
Developed countries	18.1	17.4	18.6	5.6	5.8	6.0	4.2	4.1	4.5
LIFDCs	159.8	159.2	163.5	15.4	14.2	15.0	11.2	10.2	10.9
LDCs	72.9	73.8	74.9	9.6	8.9	9.3	3.0	3.1	3.0

APPENDIX TABLE 8(B): **RICE STATISTICS**

	Total Utilization			Stocks ending in			Per caput food use		
	12/13-14/15 average	2015/16 estim.	2016/17 f'cast	2013-2015 average	2016 estim.	2017 f'cast	12/13-14/15 average	2015/16 estim.	2016/17 f'cast
	(. . . . . million tonnes, milled equivalent . . . . . .)						(. . . . . Kg/year . . . . . .)		
ASIA	**422.4**	**434.5**	**438.7**	**159.7**	**160.2**	**159.4**	**78.3**	**78.3**	**78.3**
Bangladesh	34.7	35.8	35.7	7.0	7.3	6.9	179.4	180.8	180.9
China	138.5	145.5	147.2	85.2	98.0	101.8	77.1	77.2	77.2
of which Taiwan Prov.	1.3	1.2	1.3	0.3	0.2	0.3	48.0	48.1	48.4
India	95.7	97.6	99.2	24.0	18.2	16.5	69.0	69.2	69.3
Indonesia	45.5	46.8	47.0	6.8	6.6	6.5	135.0	135.2	135.6
Iran, Islamic Republic of	2.8	2.9	2.9	0.8	0.5	0.5	33.5	33.1	33.4
Iraq	1.4	1.3	1.3	0.4	0.1	0.1	40.1	35.2	33.2
Japan	8.3	8.5	8.4	3.6	3.4	3.3	51.3	50.0	49.1
Korea, D.P.R.	1.8	1.5	1.7	0.2	0.1	0.1	60.3	54.0	57.5
Korea, Republic of	4.5	4.4	4.4	1.2	1.7	2.0	79.4	74.8	72.8
Malaysia	2.7	2.8	2.8	0.2	0.2	0.2	83.8	84.2	84.2
Myanmar	15.6	15.3	15.4	2.9	2.2	2.2	194.2	193.4	193.4
Pakistan	2.6	2.7	2.7	0.6	0.9	0.9	11.7	11.7	11.6
Philippines	13.3	12.7	13.8	2.3	2.7	2.8	117.6	116.3	116.9
Saudi Arabia	1.3	1.4	1.5	0.2	0.4	0.3	43.0	44.0	44.6
Sri Lanka	2.9	3.2	3.2	0.3	0.7	0.6	122.6	126.6	128.7
Thailand	14.1	14.7	13.5	17.8	10.7	8.2	100.7	102.3	102.7
Viet Nam	21.1	21.6	21.9	2.8	2.9	3.0	159.7	158.7	158.9
AFRICA	**31.6**	**32.8**	**33.5**	**5.3**	**4.9**	**4.8**	**24.7**	**24.8**	**24.9**
Cote d'Ívoire	1.7	1.8	1.9	0.3	0.4	0.3	73.8	75.1	75.7
Egypt	3.9	3.8	3.9	0.6	0.6	0.7	38.9	38.4	38.6
Madagascar	3.0	2.9	3.0	0.3	0.2	0.1	107.1	106.9	107.0
Nigeria	5.8	5.6	5.6	0.9	0.6	0.6	29.4	27.2	27.2
Senegal	1.6	1.7	1.8	0.3	0.5	0.4	104.0	105.2	106.0
South Africa	1.0	1.0	0.9	0.2	0.1	-	17.7	17.0	16.1
Tanzania, United Rep. of	1.5	1.9	2.0	0.3	0.6	0.6	25.1	28.0	28.6
CENTRAL AMERICA	**3.9**	**4.0**	**4.1**	**0.5**	**0.5**	**0.5**	**17.5**	**17.7**	**17.9**
Cuba	0.8	0.8	0.9	0.1	0.1	0.1	67.4	68.7	71.6
Mexico	0.8	0.8	0.8	0.1	-	-	6.3	6.4	6.3
SOUTH AMERICA	**15.1**	**15.1**	**15.2**	**2.0**	**2.5**	**1.9**	**32.9**	**31.8**	**32.1**
Argentina	0.5	0.5	0.5	0.1	0.4	0.2	9.6	10.2	10.3
Brazil	8.2	7.8	7.8	0.9	0.7	0.2	36.5	33.8	33.8
Peru	2.2	2.3	2.4	0.4	0.4	0.4	64.2	65.3	65.8
Uruguay	0.1	0.1	0.1	-	0.2	0.1	7.6	8.4	8.5
NORTH AMERICA	**4.4**	**3.9**	**4.6**	**1.3**	**1.5**	**1.9**	**9.2**	**9.1**	**9.5**
Canada	0.4	0.4	0.4	-	-	-	11.1	11.1	11.2
United States of America	4.0	3.5	4.2	1.2	1.5	1.9	9.0	8.9	9.3
EUROPE	**4.2**	**4.4**	**4.6**	**0.7**	**0.8**	**1.0**	**5.1**	**5.2**	**5.4**
European Union	3.1	3.2	3.4	0.5	0.6	0.7	5.4	5.5	5.6
Russian Federation	0.7	0.8	0.8	0.1	0.1	0.1	4.9	5.1	5.2
OCEANIA	**0.7**	**0.7**	**0.7**	**0.2**	**0.3**	**0.1**	**15.5**	**15.8**	**16.0**
Australia	0.3	0.3	0.3	0.2	0.2	0.1	9.9	10.1	10.3
WORLD	**482.3**	**495.4**	**501.4**	**169.6**	**170.7**	**169.6**	**54.3**	**54.2**	**54.3**
Developing countries	463.1	476.4	481.5	163.5	164.5	163.1	64.7	64.4	64.3
Developed countries	19.3	19.0	19.9	6.1	6.3	6.5	11.2	11.1	11.2
LIFDCs	164.3	168.0	170.6	36.3	30.5	28.2	58.9	58.7	58.7
LDCs	78.8	81.0	81.7	15.4	15.3	14.9	67.7	67.4	67.0

APPENDIX TABLE 9: **CEREAL SUPPLY AND UTILIZATION IN SELECTED EXPORTERS** (*million tonnes*)

	Wheat[1]			Coarse Grains[2]			Rice (milled basis)		
	2014/15	2015/16 *estim.*	2016/17 *f'cast*	2014/15	2015/16 *estim.*	2016/17 *f'cast*	2014/15	2015/16 *estim.*	2016/17 *f'cast*
	UNITED STATES (June/May)			**UNITED STATES**			**UNITED STATES** (Aug./July)		
Opening stocks	16.1	20.5	26.7	34.3	46.9	47.5	1.0	1.6	1.5
Production	55.1	55.8	63.2	377.6	367.2	401.7	7.1	6.1	7.5
Imports	4.1	3.1	3.1	3.5	4.0	3.7	0.8	0.8	0.7
Total Supply	**75.3**	**79.4**	**93.0**	**415.4**	**418.1**	**452.9**	**8.9**	**8.4**	**9.8**
Domestic use	31.3	31.6	37.2	311.7	313.0	326.1	4.3	3.5	4.2
Exports	23.5	21.1	25.9	56.8	57.7	62.1	3.1	3.4	3.7
Closing stocks	20.5	26.7	29.9	46.9	47.5	64.8	1.6	1.5	1.9
	CANADA (August/July)			**CANADA**			**THAILAND** (Aug./July)		
Opening stocks	10.4	7.1	4.2	4.7	3.3	4.2	19.6	16.2	10.7
Production	29.4	27.6	30.5	22.1	25.7	24.8	22.0	19.0	20.1
Imports	0.1	0.1	0.1	1.8	1.7	1.5	0.3	0.2	0.3
Total Supply	**40.0**	**34.8**	**34.8**	**28.6**	**30.8**	**30.5**	**41.8**	**35.4**	**31.0**
Domestic use	8.9	8.8	8.9	19.8	20.5	21.1	15.1	14.7	13.5
Exports	23.9	21.8	21.2	5.4	6.1	5.8	10.5	10.0	9.3
Closing stocks	7.1	4.2	4.7	3.3	4.2	3.6	16.2	10.7	8.2
	ARGENTINA (Dec./Nov.)			**ARGENTINA**			**INDIA** (Oct./Sept.)		
Opening stocks	2.0	4.9	2.0	3.8	5.3	5.5	25.5	21.5	18.2
Production	13.9	11.3	15.0	39.9	42.4	47.3	105.5	104.3	107.7
Imports	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
Total Supply	**15.9**	**16.2**	**17.0**	**43.7**	**47.7**	**52.9**	**131.0**	**125.8**	**125.9**
Domestic use	5.9	5.7	6.0	18.3	19.8	20.4	97.3	97.6	99.2
Exports	5.1	8.5	9.0	20.1	22.4	26.9	12.2	10.0	10.2
Closing stocks	4.9	2.0	2.1	5.3	5.5	5.6	21.5	18.2	16.5
	AUSTRALIA (Oct./Sept.)			**AUSTRALIA**			**PAKISTAN** (Sept./Aug.)		
Opening stocks	3.9	4.3	4.9	1.9	1.9	1.8	0.7	1.1	0.9
Production	23.7	24.2	28.1	11.7	12.9	13.8	7.0	6.8	6.9
Imports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Supply	**27.7**	**28.5**	**33.0**	**13.6**	**14.7**	**15.7**	**7.7**	**7.9**	**7.8**
Domestic use	6.8	7.1	7.6	6.0	6.2	6.8	2.8	2.7	2.7
Exports	16.6	16.5	19.5	5.7	6.7	6.5	3.9	4.4	4.2
Closing stocks	4.3	4.9	5.9	1.9	1.8	2.4	1.1	0.9	0.9
	EU (July/June)			**EU**			**VIET NAM** (Jan./Dec.)		
Opening stocks	9.0	13.5	17.2	20.1	22.2	16.4	2.7	3.0	2.9
Production	157.1	160.5	144.0	171.7	150.0	155.7	29.2	29.4	28.9
Imports	5.7	6.6	6.5	9.6	14.1	12.7	0.5	0.5	0.6
Total Supply	**171.8**	**180.6**	**167.7**	**201.4**	**186.2**	**184.7**	**32.5**	**32.9**	**32.4**
Domestic use	123.9	129.8	128.8	165.1	156.6	157.1	21.5	21.6	21.9
Exports	34.3	33.6	25.7	14.1	13.2	10.8	8.0	8.4	7.5
Closing stocks	13.5	17.2	13.2	22.2	16.4	16.7	3.0	2.9	3.0
	TOTAL OF ABOVE			**TOTAL OF ABOVE**			**TOTAL OF ABOVE**		
Opening stocks	41.4	50.3	55.0	64.6	79.6	75.4	49.5	43.3	34.1
Production	279.3	279.4	280.7	623.0	598.1	643.2	170.8	165.6	171.1
Imports	9.9	9.8	9.7	15.0	19.8	18.0	1.6	1.6	1.6
Total Supply	**330.6**	**339.5**	**345.5**	**702.6**	**697.5**	**736.6**	**221.9**	**210.5**	**206.8**
Domestic use	176.8	182.9	188.5	520.8	516.0	531.5	140.9	140.1	141.5
Exports	103.5	101.5	101.3	102.2	106.1	112.1	37.7	36.2	34.9
Closing stocks	50.3	55.0	55.8	79.6	75.4	93.0	43.3	34.1	30.4

[1] Trade data include wheat flour in wheat grain equivalent. For the **EU** semolina is also included.
[2] **Argentina** (December/November) for rye, barley and oats, (March/February) for maize and sorghum; **Australia** (November/October) for rye, barley and oats, (March/February) for maize and sorghum; **Canada** (August/July); **EU** (July/June); **United States** (June/May) for rye, barley and oats, (September/August) for maize and sorghum.

APPENDIX TABLE 10: **TOTAL OILCROPS STATISTICS** (*million tonnes*)

	Production[1]			Imports			Exports		
	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*
ASIA	**134.6**	**124.0**	**132.0**	**100.1**	**120.4**	**122.3**	**2.8**	**2.9**	**3.1**
China	60.2	56.8	57.0	76.9	91.3	92.8	1.1	1.3	0.9
of which: China Mainland	60.1	56.7	56.9	74.4	88.7	90.1	1.1	1.2	0.9
Taiwan Prov.	0.1	0.1	0.1	2.4	2.5	2.7	-	-	-
India	36.9	31.6	36.9	0.2	0.3	0.3	0.8	0.8	1.1
Indonesia	11.0	11.1	12.1	2.3	2.6	2.5	0.1	0.1	0.1
Iran, Islamic Republic of	0.7	0.7	0.7	0.8	1.9	2.0	0.1	0.1	0.1
Japan	0.3	0.3	0.3	5.7	5.7	5.5	-	-	-
Korea, Republic of	0.2	0.2	0.2	1.5	1.6	1.7	-	-	-
Malaysia	5.0	4.7	5.2	0.7	0.8	0.9	-	-	0.2
Pakistan	5.3	4.0	4.7	1.4	2.8	3.0	-	-	-
Thailand	0.7	0.7	0.7	2.2	2.6	2.7	-	-	-
Turkey	3.1	3.1	3.2	2.7	3.2	3.4	0.1	0.1	0.1
AFRICA	**17.4**	**18.2**	**17.9**	**3.8**	**3.6**	**4.6**	**0.7**	**0.6**	**0.7**
Nigeria	5.1	5.0	5.0	-	-	-	0.1	-	0.1
CENTRAL AMERICA	**1.7**	**1.8**	**1.8**	**6.3**	**6.3**	**6.1**	**0.2**	**0.2**	**0.2**
Mexico	1.3	1.3	1.3	5.6	5.6	5.4	-	-	-
SOUTH AMERICA	**167.0**	**177.0**	**183.0**	**1.8**	**3.0**	**2.9**	**64.9**	**75.2**	**77.2**
Argentina	59.1	61.8	60.5	0.1	0.4	0.7	9.7	11.8	11.4
Brazil	91.4	98.7	105.3	0.4	0.7	0.3	46.6	55.4	57.3
Paraguay	8.9	10.0	9.6	-	-	-	4.9	5.0	5.4
Uruguay	3.5	2.6	3.2	-	-	-	3.2	2.5	2.8
NORTH AMERICA	**126.6**	**142.6**	**150.0**	**3.1**	**2.0**	**2.3**	**58.0**	**69.6**	**70.1**
Canada	23.2	26.0	25.2	0.6	0.5	0.6	13.1	15.9	14.9
United States of America	103.4	116.6	124.8	2.5	1.5	1.7	44.9	53.8	55.2
EUROPE	**62.2**	**66.1**	**66.7**	**20.3**	**21.5**	**21.6**	**5.8**	**5.9**	**5.7**
European Union	32.0	32.4	31.2	18.0	18.7	19.1	1.1	0.9	1.0
Russian Federation	12.7	13.7	14.8	1.7	2.0	1.8	0.4	0.5	0.6
Ukraine	15.1	17.8	18.5	-	-	-	3.7	3.9	3.6
OCEANIA	**5.5**	**4.3**	**5.4**	**-**	**-**	**-**	**3.5**	**2.4**	**2.8**
Australia	5.1	3.9	5.0	-	-	-	3.4	2.3	2.7
WORLD	**515.1**	**534.1**	**556.9**	**135.5**	**156.8**	**159.8**	**135.9**	**156.8**	**159.8**
Developing countries	320.8	321.1	334.8	105.7	126.8	129.6	68.7	79.0	81.3
Developed countries	194.3	213.0	222.1	29.8	30.1	30.2	67.1	77.8	78.6
LIFDCs	55.7	50.6	55.8	1.7	2.6	2.6	1.5	1.6	1.9
LDCs	10.7	10.9	10.8	0.8	1.5	1.6	0.5	0.5	0.5

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

APPENDIX TABLE 11: **TOTAL OILS AND FATS STATISTICS** [1] (*million tonnes*)

	Imports			Exports			Utilization		
	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*
ASIA	**44.3**	**46.4**	**48.4**	**49.7**	**49.2**	**51.5**	**101.9**	**110.2**	**113.8**
Bangladesh	1.8	2.0	2.0	-	-	-	2.1	2.4	2.5
China	11.4	9.5	10.0	0.5	0.6	0.7	36.8	38.6	39.1
of which: China Mainland	10.5	8.5	9.0	0.3	0.4	0.4	35.6	37.3	37.8
Taiwan Prov.	0.4	0.4	0.4	-	-	-	0.8	0.9	0.9
India	12.3	15.4	15.9	0.4	0.2	0.3	21.6	24.2	25.4
Indonesia	0.1	0.2	0.2	25.5	27.1	28.0	10.2	11.0	11.5
Iran	1.6	1.1	1.2	0.2	0.2	0.2	2.0	1.7	1.8
Japan	1.3	1.3	1.3	-	-	-	3.1	3.2	3.2
Korea, Republic of	1.0	1.1	1.2	-	-	-	1.4	1.5	1.6
Malaysia	1.5	1.5	1.7	19.2	17.9	19.0	4.4	5.0	5.3
Pakistan	2.8	3.0	3.1	0.1	0.2	0.1	4.4	4.9	5.0
Philippines	0.7	0.9	0.9	0.9	0.8	0.8	1.6	1.8	2.0
Singapore	0.8	0.8	0.8	0.2	0.1	0.1	0.7	0.7	0.7
Turkey	1.8	1.9	2.0	0.7	0.6	0.7	2.9	3.2	3.3
AFRICA	**10.1**	**10.8**	**11.2**	**1.8**	**2.0**	**1.9**	**16.2**	**17.2**	**17.6**
Algeria	0.8	0.8	0.9	0.1	0.1	0.1	0.9	1.0	1.0
Egypt	2.0	2.1	2.1	0.3	0.3	0.2	2.2	2.4	2.4
Nigeria	1.4	1.5	1.6	0.2	0.1	0.2	3.2	3.4	3.4
South Africa	0.8	0.8	0.9	0.1	0.1	0.1	1.3	1.4	1.5
CENTRAL AMERICA	**2.5**	**2.7**	**2.7**	**1.0**	**1.3**	**1.2**	**5.1**	**5.1**	**5.4**
Mexico	1.4	1.5	1.5	0.1	0.1	-	3.4	3.4	3.6
SOUTH AMERICA	**3.1**	**3.2**	**3.5**	**8.9**	**10.9**	**10.9**	**17.0**	**17.8**	**19.0**
Argentina	0.1	0.1	-	5.3	6.7	6.7	4.0	4.1	4.5
Brazil	0.6	0.6	0.7	1.7	1.9	1.9	8.4	8.9	9.3
Paraguay	-	-	-	0.6	0.7	0.7	0.2	0.1	0.1
Uruguay	0.1	0.1	0.1	-	-	-	0.1	0.1	0.2
NORTH AMERICA	**4.9**	**5.2**	**5.2**	**6.6**	**7.0**	**7.1**	**19.7**	**20.4**	**21.1**
Canada	0.5	0.4	0.4	3.2	3.5	3.6	1.3	1.3	1.3
United States of America	4.4	4.8	4.8	3.4	3.5	3.6	18.4	19.1	19.8
EUROPE	**14.0**	**14.2**	**14.4**	**9.8**	**10.7**	**11.6**	**37.2**	**39.2**	**39.0**
European Union	11.5	11.5	11.6	3.3	3.1	3.2	30.7	32.4	32.1
Russian Federation	1.2	1.4	1.4	2.0	2.3	2.5	4.3	4.6	4.6
Ukraine	0.3	0.3	0.3	3.9	4.9	5.5	0.9	0.9	0.9
OCEANIA	**0.6**	**0.7**	**0.7**	**1.8**	**1.9**	**1.9**	**1.2**	**1.2**	**1.3**
Australia	0.4	0.5	0.5	0.7	0.7	0.7	0.8	0.8	0.9
WORLD	**79.5**	**83.1**	**86.1**	**79.6**	**83.0**	**86.1**	**198.2**	**211.2**	**217.3**
Developing countries	58.7	61.7	64.4	62.1	64.1	66.1	137.0	147.1	152.6
Developed countries	20.8	21.4	21.8	17.5	18.9	20.0	61.2	64.1	64.7
LIFDCs	21.2	25.0	25.9	2.5	2.5	2.5	36.3	39.8	41.3
LDCs	6.3	7.1	7.3	0.5	0.7	0.7	9.3	10.1	10.3

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

APPENDIX TABLE 12: **TOTAL MEALS AND CAKES STATISTICS** [1] (*million tonnes*)

	Imports			Exports			Utilization		
	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*	12/13-14/15 average	2015/16 *estim.*	2016/17 *f'cast*
ASIA	**34.1**	**35.5**	**38.5**	**15.5**	**12.9**	**14.4**	**144.2**	**160.8**	**167.8**
China	2.7	2.7	2.9	2.1	2.4	2.4	78.9	88.2	91.8
of which: China Mainland	2.1	2.1	2.2	2.1	2.3	2.4	76.4	85.6	89.0
Taiwan Prov.	0.6	0.6	0.6	-	-	-	2.5	2.6	2.7
India	0.2	0.3	0.3	4.2	0.9	2.2	12.3	13.4	14.0
Indonesia	4.0	4.6	4.9	4.1	4.4	4.6	6.0	6.9	7.2
Iran, Islamic Republic of	2.5	1.7	2.1	0.1	0.1	0.1	3.2	3.7	3.8
Japan	2.4	2.2	2.4	-	-	-	6.4	6.3	6.3
Korea, Republic of	3.9	4.0	4.5	0.2	0.2	0.2	4.9	5.3	5.6
Malaysia	1.4	1.3	1.5	2.6	2.7	2.7	2.0	1.9	2.2
Pakistan	0.8	0.7	0.7	0.2	0.3	0.4	3.6	3.8	4.2
Philippines	2.3	2.8	3.0	0.6	0.5	0.5	2.7	3.2	3.6
Saudi Arabia	0.8	1.0	1.1	-	-	-	1.1	1.5	1.6
Thailand	3.3	3.0	3.2	0.2	0.2	0.2	5.6	5.9	5.9
Turkey	1.8	1.8	1.9	0.1	0.1	0.1	4.7	5.3	5.7
Viet Nam	4.3	5.1	5.6	0.2	0.3	0.2	5.3	6.7	7.1
AFRICA	**5.3**	**6.7**	**6.7**	**0.9**	**1.0**	**0.9**	**12.4**	**14.2**	**14.5**
Egypt	1.1	2.3	1.7	-	-	-	2.7	3.4	3.5
South Africa	1.1	0.9	1.0	0.1	0.1	0.1	2.1	2.2	2.3
CENTRAL AMERICA	**3.6**	**4.5**	**4.8**	**0.2**	**0.2**	**0.2**	**8.6**	**9.8**	**10.0**
Mexico	1.9	2.7	2.9	0.1	0.1	0.1	6.3	7.2	7.4
SOUTH AMERICA	**5.4**	**5.6**	**5.9**	**46.1**	**53.3**	**55.0**	**27.1**	**29.8**	**31.3**
Argentina	-	-	-	27.2	32.4	33.4	3.6	4.5	5.3
Bolivia	-	-	-	1.6	1.7	1.8	0.2	0.3	0.3
Brazil	-	-	-	13.9	15.4	15.6	16.2	16.8	17.4
Chile	1.2	1.2	1.3	0.2	0.2	0.2	1.6	1.7	1.7
Paraguay	-	-	-	2.2	2.7	2.9	0.5	0.6	0.5
Peru	0.9	1.0	1.1	0.8	0.7	0.9	1.2	1.4	1.5
Uruguay	0.2	0.2	0.2	-	-	-	0.2	0.2	0.2
Venezuela	1.3	1.1	1.3	-	-	-	1.4	1.4	1.5
NORTH AMERICA	**4.9**	**5.2**	**5.0**	**15.7**	**15.9**	**16.5**	**35.6**	**38.8**	**39.7**
Canada	1.0	0.9	0.9	4.5	4.8	4.8	2.2	2.2	2.1
United States of America	3.9	4.3	4.1	11.3	11.1	11.7	33.4	36.7	37.6
EUROPE	**30.0**	**30.9**	**31.9**	**7.6**	**8.1**	**9.0**	**64.6**	**68.4**	**68.8**
European Union	27.3	28.2	29.1	1.3	1.2	1.3	55.7	58.2	58.2
Russian Federation	0.6	0.5	0.5	2.2	2.2	2.4	5.1	5.9	6.1
Ukraine	-	-	-	3.6	4.3	4.9	1.3	1.4	1.5
OCEANIA	**2.9**	**3.2**	**3.3**	**0.3**	**0.3**	**0.2**	**3.6**	**4.1**	**4.2**
Australia	1.0	1.1	1.2	0.1	0.1	0.1	1.6	1.9	2.1
WORLD	**86.2**	**91.6**	**96.2**	**86.3**	**91.7**	**96.2**	**296.1**	**325.9**	**336.4**
Developing countries	45.5	49.5	52.9	62.8	67.6	70.6	185.4	207.8	216.9
Developed countries	40.7	42.1	43.3	23.5	24.1	25.6	110.7	118.2	119.5
LIFDCs	2.2	2.6	2.7	5.1	1.8	3.1	19.8	22.0	22.7
LDCs	0.8	0.8	0.9	0.4	0.4	0.4	4.1	4.7	4.9

[1] Expressed in product weight; includes meals and cakes derived from oilcrops as well as fish meal and other meals from animal origin.

APPENDIX TABLE 13: **TOTAL MEAT STATISTICS**[1]
(*thousand tonnes, carcass weight equivalent*)

	Production		Imports		Exports		Utilization	
	2015 *estim.*	2016 *f'cast*	2015 *estim.*	2016 *f'cast*	2015 *estim.*	2016 *f'cast*	2015 *estim.*	2016 *f'cast*
ASIA	**134 573**	**132 999**	**15 736**	**16 914**	**4 203**	**4 153**	**146 413**	**145 802**
China	86 782	84 581	4 314	5 012	609	553	90 736	89 070
India	6 532	6 745	1	1	1 709	1 685	4 824	5 061
Indonesia	3 429	3 459	86	92	5	5	3 510	3 547
Iran, Islamic Republic of	2 694	2 726	101	134	67	85	2 728	2 774
Japan	3 248	3 259	3 158	3 332	14	14	6 379	6 589
Korea, Republic of	2 429	2 472	1 124	1 200	42	44	3 568	3 628
Malaysia	1 681	1 688	336	346	61	62	1 956	1 972
Pakistan	3 161	3 218	29	30	69	70	3 120	3 177
Philippines	3 214	3 259	402	458	12	10	3 604	3 707
Saudi Arabia	926	959	1 196	1 202	93	103	2 030	2 058
Singapore	120	121	348	354	34	33	434	442
Thailand	2 832	2 869	35	29	952	992	1 924	1 906
Turkey	3 238	3 248	23	10	371	324	2 894	2 933
Viet Nam	4 400	4 439	1 826	1 879	26	32	6 201	6 286
AFRICA	**17 310**	**17 319**	**2 804**	**2 822**	**295**	**253**	**19 819**	**19 888**
Algeria	755	762	89	84	2	2	842	844
Angola	264	259	438	368	-	-	701	627
Egypt	2 088	2 108	385	395	13	13	2 459	2 489
Nigeria	1 494	1 503	4	4	1	1	1 497	1 506
South Africa	2 886	2 868	556	663	207	165	3 234	3 366
CENTRAL AMERICA	**9 165**	**9 357**	**3 071**	**3 155**	**520**	**546**	**11 717**	**11 966**
Cuba	313	317	263	253	-	-	576	570
Mexico	6 456	6 634	1 992	2 062	298	328	8 150	8 368
SOUTH AMERICA	**42 863**	**43 209**	**794**	**891**	**8 133**	**8 816**	**35 530**	**35 285**
Argentina	5 138	5 196	19	23	451	425	4 705	4 793
Brazil	26 885	27 244	67	62	6 616	7 277	20 336	20 030
Chile	1 460	1 475	378	482	329	330	1 509	1 626
Colombia	2 531	2 520	131	127	15	21	2 647	2 626
Uruguay	675	681	48	53	356	364	368	370
Venezuela	2 034	1 918	46	35	1	-	2 083	1 954
NORTH AMERICA	**47 931**	**49 329**	**3 053**	**2 874**	**8 513**	**8 775**	**42 413**	**43 440**
Canada	4 450	4 568	782	750	1 723	1 848	3 497	3 471
United States of America	43 481	44 760	2 259	2 112	6 789	6 927	38 904	39 957
EUROPE	**61 025**	**61 623**	**3 183**	**3 293**	**4 882**	**5 627**	**59 329**	**59 289**
Belarus	1 129	1 149	37	35	261	305	904	879
European Union	46 795	47 287	1 452	1 519	4 155	4 803	44 093	44 003
Russian Federation	9 039	9 123	1 235	1 275	155	193	10 120	10 205
Ukraine	2 403	2 393	72	80	219	240	2 256	2 233
OCEANIA	**6 349**	**5 985**	**486**	**476**	**3 242**	**2 934**	**3 595**	**3 555**
Australia	4 483	4 185	256	249	2 208	1 939	2 533	2 522
New Zealand	1 356	1 291	78	73	1 031	991	404	373
WORLD	**319 216**	**319 821**	**29 128**	**30 425**	**29 787**	**31 103**	**318 814**	**319 225**
Developing countries	200 470	199 428	19 309	20 513	13 131	13 747	206 973	206 224
Developed countries	118 747	120 393	9 818	9 912	16 656	17 356	111 841	113 000
LIFDCs	19 351	19 578	1 328	1 317	1 868	1 840	18 811	19 055
LDCs	9 882	9 889	1 353	1 243	24	25	11 211	11 108

[1] Including "other meat".

APPENDIX TABLE 14: **BOVINE MEAT STATISTICS**
(*thousand tonnes, carcass weight equivalent*)

	Production		Imports		Exports		Utilization	
	2015 *estim.*	2016 *f'cast*	2015 *estim.*	2016 *f'cast*	2015 *estim.*	2016 *f'cast*	2015 *estim.*	2016 *f'cast*
ASIA	**17 886**	**18 044**	**4 578**	**4 893**	**1 943**	**1 901**	**20 564**	**21 032**
China	6 710	6 795	1 207	1 399	38	33	7 898	8 151
India	2 630	2 640	-	-	1 678	1 655	952	985
Indonesia	601	610	70	75	-	-	670	685
Iran, Islamic Republic of	254	254	98	131	4	4	348	381
Japan	481	465	703	689	2	2	1 164	1 161
Korea, Republic of	323	308	366	443	8	7	720	740
Malaysia	31	31	220	219	15	13	236	237
Pakistan	1 725	1 775	4	4	33	33	1 697	1 747
Philippines	295	300	136	127	3	1	428	426
AFRICA	**6 230**	**6 261**	**747**	**734**	**128**	**88**	**6 848**	**6 907**
Algeria	140	140	82	77	-	-	222	217
Angola	105	104	94	75	-	-	199	179
Egypt	859	877	360	370	9	10	1 210	1 237
South Africa	870	880	25	24	92	50	803	854
CENTRAL AMERICA	**2 555**	**2 571**	**366**	**374**	**323**	**336**	**2 598**	**2 609**
Mexico	1 850	1 865	195	200	151	170	1 894	1 895
SOUTH AMERICA	**15 549**	**15 324**	**329**	**379**	**2 542**	**2 804**	**13 341**	**12 899**
Argentina	2 713	2 653	-	-	201	210	2 512	2 443
Brazil	9 425	9 284	53	50	1 626	1 830	7 853	7 504
Chile	211	200	217	271	11	11	417	460
Colombia	845	830	5	4	13	19	837	815
Uruguay	546	551	4	4	333	343	216	212
Venezuela	530	510	30	30	-	-	565	540
NORTH AMERICA	**11 873**	**12 401**	**1 681**	**1 487**	**1 440**	**1 496**	**12 131**	**12 393**
Canada	1 058	1 073	282	270	356	388	987	955
United States of America	10 815	11 328	1 396	1 215	1 084	1 108	11 142	11 436
EUROPE	**10 371**	**10 472**	**928**	**900**	**475**	**531**	**10 824**	**10 841**
European Union	7 715	7 882	322	334	289	315	7 748	7 901
Russian Federation	1 604	1 551	510	470	43	44	2 071	1 977
Ukraine	380	370	2	2	27	25	355	347
OCEANIA	**3 089**	**2 692**	**63**	**61**	**2 273**	**1 994**	**881**	**787**
Australia	2 379	2 022	14	14	1 688	1 430	707	635
New Zealand	690	650	16	13	582	561	124	102
WORLD	**67 553**	**67 764**	**8 691**	**8 828**	**9 124**	**9 149**	**67 188**	**67 469**
Developing countries	41 623	41 619	5 254	5 629	4 936	5 128	42 007	42 105
Developed countries	25 930	26 146	3 437	3 199	4 188	4 020	25 181	25 364
LIFDCs	7 933	7 948	133	134	1 804	1 777	6 262	6 305
LDCs	3 519	3 520	166	148	4	4	3 682	3 664

APPENDIX TABLE 15: **OVINE MEAT STATISTICS**
(*thousand tonnes, carcass weight equivalent*)

	Production		Imports		Exports		Utilization	
	2015 *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*
ASIA	**8 196**	**8 307**	**559**	**541**	**42**	**45**	**8 714**	**8 804**
Bangladesh	213	216	-	-	-	-	213	216
China	4 185	4 273	252	218	1	3	4 436	4 488
India	730	728	-	-	22	21	709	707
Iran, Islamic Republic of	291	295	1	1	-	-	292	296
Pakistan	467	470	-	-	12	13	455	457
Saudi Arabia	134	136	61	57	2	2	193	191
Turkey	366	368	1	1	-	-	367	369
AFRICA	**3 103**	**3 094**	**32**	**31**	**35**	**36**	**3 100**	**3 090**
Algeria	315	320	4	4	-	-	319	324
Nigeria	487	488	-	-	-	-	487	488
South Africa	182	179	11	11	1	1	191	189
Sudan	483	481	-	-	6	6	478	476
CENTRAL AMERICA	**124**	**125**	**20**	**21**	**-**	**-**	**144**	**145**
Mexico	95	94	12	12	-	-	106	106
SOUTH AMERICA	**324**	**330**	**7**	**7**	**16**	**15**	**315**	**321**
Brazil	116	118	7	7	-	-	123	125
NORTH AMERICA	**92**	**93**	**125**	**132**	**3**	**3**	**213**	**222**
United States of America	75	76	103	109	3	3	175	182
EUROPE	**1 242**	**1 264**	**179**	**182**	**25**	**25**	**1 396**	**1 422**
European Union	919	938	166	169	18	17	1 067	1 090
Russian Federation	191	193	4	4	-	-	195	197
OCEANIA	**964**	**919**	**26**	**27**	**842**	**814**	**147**	**132**
Australia	558	542	1	1	442	434	117	109
New Zealand	405	377	4	4	400	380	9	1
WORLD	**14 045**	**14 132**	**948**	**942**	**964**	**937**	**14 029**	**14 136**
Developing countries	11 733	11 841	619	599	93	96	12 259	12 344
Developed countries	2 312	2 291	328	343	871	841	1 770	1 792
LIFDCs	3 503	3 499	24	25	42	43	3 485	3 481
LDCs	1 599	1 593	5	5	17	18	1 587	1 580

APPENDIX TABLE 16: **PIGMEAT STATISTICS**
(*thousand tonnes, carcass weight equivalent*)

	Production		Imports		Exports		Utilization	
	2015 *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*
ASIA	**66 413**	**65 135**	**3 815**	**4 449**	**220**	**197**	**70 257**	**69 433**
China	55 380	53 994	1 447	1 948	127	100	56 930	55 882
India	357	357	1	-	-	-	357	357
Indonesia	748	750	6	6	-	-	753	756
Japan	1 254	1 275	1 286	1 390	2	2	2 545	2 665
Korea, D.P.R.	114	114	3	3	-	-	116	116
Korea, Republic of	1 217	1 240	606	598	4	3	1 831	1 839
Malaysia	230	230	25	26	5	5	249	250
Philippines	1 720	1 740	93	107	3	3	1 810	1 843
Thailand	985	990	3	3	30	32	958	961
Viet Nam	3 354	3 388	112	140	25	31	3 440	3 497
AFRICA	**1 365**	**1 366**	**304**	**277**	**35**	**28**	**1 634**	**1 615**
Madagascar	60	58	-	-	-	-	60	58
Nigeria	257	259	1	1	-	-	258	260
South Africa	240	238	41	29	29	24	252	243
Uganda	118	117	1	1	-	-	118	117
CENTRAL AMERICA	**1 840**	**1 905**	**1 049**	**1 086**	**158**	**168**	**2 730**	**2 822**
Cuba	199	201	16	17	-	-	215	218
Mexico	1 323	1 385	845	870	137	147	2 030	2 109
SOUTH AMERICA	**5 662**	**5 769**	**191**	**212**	**864**	**1 036**	**4 989**	**4 945**
Argentina	475	495	16	19	1	1	490	513
Brazil	3 519	3 609	2	2	691	870	2 829	2 740
Chile	524	525	46	70	169	161	401	434
Colombia	240	237	65	56	-	-	305	293
Venezuela	260	255	-	-	-	-	260	255
NORTH AMERICA	**13 172**	**13 424**	**853**	**861**	**3 384**	**3 483**	**10 586**	**10 813**
Canada	2 051	2 090	244	235	1 191	1 281	1 099	1 044
United States of America	11 121	11 334	605	622	2 192	2 203	9 482	9 765
EUROPE	**28 262**	**28 381**	**538**	**644**	**2 544**	**3 076**	**26 256**	**25 949**
Belarus	377	406	6	5	29	40	354	371
European Union	23 349	23 384	13	13	2 416	2 957	20 946	20 440
Russian Federation	3 069	3 139	415	520	34	41	3 450	3 618
Serbia	260	265	29	29	22	15	267	279
Ukraine	730	710	6	7	29	7	707	709
OCEANIA	**508**	**520**	**302**	**291**	**35**	**34**	**776**	**777**
Australia	374	385	221	212	33	32	562	565
Papua New Guinea	72	72	9	9	-	-	81	81
WORLD	**117 223**	**116 499**	**7 052**	**7 821**	**7 241**	**8 023**	**117 228**	**116 354**
Developing countries	74 104	72 977	4 100	4 662	1 275	1 428	77 171	76 256
Developed countries	43 119	43 522	2 952	3 159	5 965	6 595	40 057	40 099
LIFDCs	1 626	1 631	183	185	4	4	1 805	1 811
LDCs	1 580	1 584	188	170	1	1	1 767	1 753

APPENDIX TABLE 17: **POULTRY MEAT STATISTICS**
(*thousand tonnes, carcass weight equivalent*)

	Production		Imports		Exports		Utilization	
	2015 *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*	**2015** *estim.*	**2016** *f'cast*
ASIA	**40 122**	**39 558**	**6 733**	**6 979**	**1 973**	**1 986**	**44 895**	**44 551**
China	19 022	18 035	1 402	1 441	428	402	19 996	19 073
India	2 666	2 872	-	-	8	7	2 658	2 865
Indonesia	1 963	1 980	3	4	-	-	1 966	1 984
Iran, Islamic Republic of	2 132	2 160	-	-	60	78	2 072	2 082
Japan	1 501	1 507	1 134	1 215	9	9	2 622	2 713
Korea, Republic of	878	913	134	140	31	33	988	1 020
Kuwait	47	50	143	152	-	-	190	201
Malaysia	1 418	1 425	57	63	40	44	1 434	1 444
Saudi Arabia	681	709	971	986	60	70	1 592	1 625
Singapore	100	101	152	164	9	10	243	255
Thailand	1 657	1 687	4	4	874	923	796	768
Turkey	1 913	1 910	1	1	346	303	1 568	1 608
Yemen	149	148	57	48	-	-	205	196
AFRICA	**5 170**	**5 156**	**1 688**	**1 746**	**89**	**93**	**6 770**	**6 809**
Angola	32	31	233	198	-	-	265	229
South Africa	1 571	1 548	479	598	79	83	1 971	2 063
CENTRAL AMERICA	**4 526**	**4 637**	**1 618**	**1 655**	**37**	**39**	**6 107**	**6 253**
Cuba	36	36	229	218	-	-	265	254
Mexico	3 085	3 187	928	966	8	10	4 005	4 143
SOUTH AMERICA	**21 120**	**21 578**	**266**	**292**	**4 644**	**4 893**	**16 742**	**16 977**
Argentina	1 764	1 861	3	4	217	182	1 550	1 682
Brazil	13 794	14 202	4	4	4 274	4 552	9 524	9 654
Chile	700	725	115	140	141	149	674	716
Venezuela	1 230	1 140	15	5	1	-	1 244	1 145
NORTH AMERICA	**22 568**	**23 184**	**385**	**385**	**3 667**	**3 775**	**19 266**	**19 794**
Canada	1 324	1 388	235	223	176	179	1 373	1 432
United States of America	21 244	21 796	146	157	3 491	3 595	17 889	18 358
EUROPE	**19 956**	**20 312**	**1 371**	**1 400**	**1 753**	**1 911**	**19 577**	**19 801**
European Union	13 770	14 041	852	903	1 351	1 432	13 271	13 512
Russian Federation	4 084	4 150	258	232	78	108	4 266	4 275
Ukraine	1 244	1 264	63	70	164	207	1 144	1 126
OCEANIA	**1 356**	**1 423**	**91**	**93**	**50**	**52**	**1 396**	**1 464**
Australia	1 150	1 214	18	20	31	31	1 137	1 203
New Zealand	178	181	1	1	19	21	160	161
WORLD	**114 818**	**115 848**	**12 153**	**12 550**	**12 213**	**12 749**	**114 753**	**115 649**
Developing countries	68 930	68 912	9 246	9 533	6 725	6 994	71 467	71 451
Developed countries	45 889	46 936	2 907	3 018	5 488	5 755	43 287	44 199
LIFDCs	4 707	4 919	959	945	15	14	5 651	5 850
LDCs	2 500	2 508	967	894	2	2	3 466	3 401

APPENDIX TABLE 18: **MILK AND MILK PRODUCTS STATISTICS**
(*thousand tonnes, milk equivalent*)

	Production			Imports			Exports		
	2012-2014 average	2015 *estim.*	2016 *f'cast*	2012-2014 average	2015 *estim.*	2016 *f'cast*	2012-2014 average	2015 *estim.*	2016 *f'cast*
ASIA	**296 515**	**317 174**	**326 945**	**37 746**	**39 597**	**39 808**	**6 572**	**6 304**	**6 273**
China	41 861	42 601	43 108	11 701	10 731	11 943	106	75	74
India[1]	138 811	153 032	160 377	130	93	98	762	259	244
Indonesia	1 384	1 450	1 490	2 550	2 548	2 515	101	101	101
Iran, Islamic Republic of	7 628	7 800	7 870	482	469	459	447	467	483
Japan	7 491	7 375	7 340	1 758	2 011	1 940	5	7	8
Korea, Republic of	2 141	2 200	2 193	875	977	936	19	21	20
Malaysia	86	86	86	1 877	2 296	2 120	516	720	617
Pakistan	38 944	41 000	42 000	429	461	445	78	64	64
Philippines	20	23	23	1 676	1 654	1 787	120	149	183
Saudi Arabia	2 344	2 400	2 440	2 770	2 954	2 988	1 451	1 363	1 390
Singapore	-	-	-	1 785	1 756	1 560	622	609	592
Thailand	1 081	1 300	1 340	1 444	1 583	1 437	203	197	219
Turkey	18 477	20 517	20 927	192	227	226	502	469	473
AFRICA	**45 834**	**46 191**	**46 121**	**9 204**	**10 399**	**9 703**	**1 094**	**1 152**	**1 135**
Algeria	3 079	3 400	3 420	2 621	3 057	2 706	3	3	3
Egypt	5 896	5 940	5 970	1 539	1 606	1 591	499	465	456
Kenya	4 954	4 880	4 980	43	90	93	17	10	11
South Africa	3 406	3 420	3 250	232	307	283	251	379	373
Sudan	7 543	7 500	7 470	202	256	269	-	-	-
Tunisia	1 168	1 200	1 220	99	95	87	59	45	40
CENTRAL AMERICA	**16 795**	**17 168**	**17 461**	**4 794**	**5 561**	**5 700**	**663**	**732**	**760**
Costa Rica	1 060	1 125	1 145	52	68	63	167	146	145
Mexico	11 147	11 570	11 830	2 964	3 327	3 504	162	205	222
SOUTH AMERICA	**68 901**	**70 145**	**66 104**	**3 684**	**3 733**	**3 597**	**4 559**	**4 325**	**4 193**
Argentina	11 508	11 552	10 000	83	14	16	2 413	2 017	1 974
Brazil	34 363	35 203	33 443	931	934	1 155	190	380	211
Colombia	6 480	6 600	6 400	183	231	315	24	49	49
Uruguay	2 134	2 074	1 836	19	27	27	1 298	1 375	1 452
Venezuela	2 626	2 600	2 200	1 631	1 614	1 046	-	-	-
NORTH AMERICA	**100 365**	**103 163**	**105 029**	**2 170**	**2 668**	**2 839**	**10 307**	**9 871**	**9 489**
Canada	8 498	8 682	8 685	607	649	630	480	520	535
United States of America	91 866	94 480	96 343	1 549	2 005	2 194	9 825	9 349	8 952
EUROPE	**214 799**	**222 414**	**223 624**	**6 844**	**5 308**	**5 645**	**23 447**	**26 731**	**27 267**
Belarus	6 701	7 047	7 175	107	171	192	4 103	4 822	4 985
European Union	155 233	163 600	165 700	1 443	1 347	1 362	16 317	18 429	18 824
Russian Federation	30 924	30 550	30 085	4 360	3 034	3 329	204	290	299
Ukraine	11 440	10 984	10 369	184	33	39	852	904	880
OCEANIA	**30 247**	**32 449**	**31 958**	**856**	**1 060**	**1 115**	**21 810**	**22 953**	**23 223**
Australia[2]	10 002	10 470	10 325	589	706	747	3 620	3 643	3 659
New Zealand[3]	20 174	21 909	21 563	81	151	164	18 187	19 307	19 561
WORLD	**773 456**	**808 705**	**817 243**	**65 298**	**68 326**	**68 406**	**68 453**	**72 069**	**72 339**
Developing countries	395 651	417 470	423 371	52 815	56 412	56 007	12 580	12 080	11 932
Developed countries	377 805	391 235	393 872	12 483	11 914	12 400	55 873	59 989	60 407
LIFDCs	187 769	202 424	209 941	7 110	8 134	7 968	1 444	978	1 012
LDCs	32 336	32 545	32 522	3 300	3 797	3 728	191	155	158

[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), liquid milk (1.0), whey dry (7.6). The conversion factors cited refer to the solids content method. Refer to IDF Bulletin No. 390 (March 2004).

APPENDIX TABLE 19: FISH AND FISHERY PRODUCTS STATISTICS [1]

	Capture fisheries production		Aquaculture fisheries production		Exports			Imports		
	2013	2014	2013	2014	2014	2015 estim.	2016 f'cast	2014	2015 estim.	2016 f'cast
	Million tonnes (live weight equivalent)				USD billion			USD billion		
ASIA	**50.8**	**52.8**	**62.6**	**65.6**	**57.8**	**53.1**	**55.8**	**43.4**	**41.8**	**42.7**
China[2]	17.4	18.3	43.9	45.8	23.8	22.1	22.3	13.5	13.4	13.8
of which: Hong Kong SAR	0.2	0.2	-	-	1.0	0.8	0.7	3.6	3.6	3.9
Taiwan Prov.	0.9	1.1	0.3	0.3	1.8	1.6	1.5	1.2	1.2	1.3
India	4.6	4.7	4.6	4.9	5.6	4.9	5.0	0.1	0.1	0.1
Indonesia	6.0	6.4	4.0	4.3	4.2	3.6	3.7	0.3	0.3	0.3
Japan	3.7	3.7	0.6	0.7	1.9	1.9	1.8	14.8	13.5	13.4
Korea, Rep. of	1.6	1.7	0.4	0.5	1.7	1.5	1.6	4.3	4.3	4.4
Philippines	2.3	2.4	0.8	0.8	1.0	0.8	0.5	0.3	0.4	0.3
Thailand	1.8	1.8	1.0	0.9	6.6	5.6	5.6	2.7	2.5	2.9
Viet Nam	2.8	2.9	3.2	3.4	8.0	8.0	8.1	1.3	1.3	1.3
AFRICA	**8.4**	**8.6**	**1.6**	**1.7**	**6.1**	**5.9**	**5.9**	**5.6**	**5.4**	**5.4**
Egypt	0.4	0.3	1.1	1.1	-	-	-	0.7	0.7	0.7
Morocco	1.3	1.4	-	-	2.0	1.9	2.0	0.2	0.2	0.1
Namibia	0.5	0.4	-	-	0.7	0.7	0.7	0.1	0.1	0.1
Nigeria	0.7	0.8	0.3	0.3	0.1	0.1	-	1.3	1.3	1.3
Senegal	0.5	0.5	-	-	0.4	0.4	0.4	-	-	-
South Africa	0.4	0.6	-	-	0.6	0.6	0.6	0.4	0.4	0.4
CENTRAL AMERICA	**2.2**	**2.2**	**0.4**	**0.4**	**2.8**	**2.5**	**2.1**	**1.8**	**1.7**	**1.6**
Mexico	1.6	1.5	0.2	0.2	1.2	1.0	0.9	0.9	0.8	0.7
Panama	0.2	0.2	-	-	0.2	0.2	0.2	0.1	0.1	0.1
SOUTH AMERICA	**10.3**	**8.6**	**2.1**	**2.4**	**15.5**	**13.2**	**12.9**	**3.4**	**2.8**	**2.5**
Argentina	0.9	0.8	-	-	1.6	1.5	1.6	0.2	0.2	0.2
Brazil	0.8	0.8	0.5	0.6	0.2	0.2	0.3	1.6	1.2	1.1
Chile	1.8	2.2	1.0	1.2	5.9	4.8	4.8	0.4	0.4	0.3
Ecuador	0.5	0.7	0.3	0.4	4.3	3.7	3.6	0.1	0.1	0.1
Peru	5.9	3.6	0.1	0.1	2.9	2.4	2.1	0.2	0.3	0.3
NORTH AMERICA	**6.3**	**6.1**	**0.6**	**0.6**	**11.2**	**11.1**	**11.4**	**23.3**	**21.5**	**21.4**
Canada	0.9	0.9	0.2	0.1	4.5	4.7	4.9	3.0	2.7	2.7
United States of America	5.1	5.0	0.4	0.4	6.1	5.9	6.0	20.3	18.8	18.7
EUROPE	**13.5**	**13.7**	**2.8**	**2.9**	**51.8**	**45.5**	**49.1**	**60.8**	**52.6**	**57.5**
European Union[2]	5.0	5.5	1.2	1.3	33.5	29.9	32.5	54.1	47.9	52.7
of which Extra -EU					6.1	5.4	5.5	28.2	25.0	27.1
Iceland	1.4	1.1	-	-	2.1	2.1	1.9	0.1	0.2	0.1
Norway	2.1	2.3	1.2	1.3	10.8	9.1	10.4	1.4	1.2	1.3
Russian Federation	4.3	4.2	0.2	0.2	3.8	3.1	2.9	3.0	1.7	1.5
OCEANIA	**1.2**	**1.3**	**0.2**	**0.2**	**3.1**	**2.9**	**2.9**	**2.8**	**2.7**	**2.6**
Australia	0.2	0.2	0.1	0.1	1.1	1.1	1.0	1.7	1.4	1.4
New Zealand	0.4	0.4	0.1	0.1	1.2	1.1	1.2	0.2	0.2	0.2
WORLD[3]	**92.7**	**93.4**	**70.3**	**73.8**	**148.3**	**134.1**	**140.0**	**141.3**	**128.5**	**133.6**
Excl. Intra-EU					120.9	109.5	112.9	115.4	105.6	108.0
Developing countries	68.4	68.9	66.1	69.4	80.8	73.2	75.3	38.7	37.6	38.1
Developed countries	24.3	24.5	4.2	4.4	67.4	60.8	64.0	102.0	90.2	93.2
LIFDCs	11.8	12.1	7.1	7.6	9.1	8.2	8.1	3.3	3.3	3.4
LDCs	10.3	10.7	3.2	3.4	2.9	2.9	2.9	1.1	1.1	1.1

[1] Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fish meal and fish oil.
[2] Including intra-trade. Cyprus is included in the European Union as well as in Asia.
[3] For capture fisheries production, the aggregate includes also 22 155 tonnes in 2013 and 7 999 in 2014 of not identified countries, data not included in any other aggregates.

APPENDIX TABLE 20: **SELECTED INTERNATIONAL PRICES FOR WHEAT AND COARSE GRAINS**

Period	Wheat			Maize		Barley		Sorghum
	US No. 2 Hard Red Winter Ord. Prot. [1]	US Soft Red Winter No. 2 [2]	Argentina Trigo Pan [3]	US No. 2 Yellow [2]	Argentina [3]	France feed Rouen	Australia feed Southern States	US No. 2 Yellow [2]
	(USD/tonne)							
Annual (July/June)								
2006/07	212	176	188	150	145	185	185	155
2007/08	361	311	322	200	192	319	300	206
2008/09	270	201	234	188	180	178	179	170
2009/10	209	185	224	160	168	146	154	165
2010/11	316	289	311	254	260	266	248	248
2011/12	300	259	264	281	269	270	249	264
2012/13	348	310	336	311	277	297	298	281
2013/14	318	265	335	216	219	243	241	218
2014/15	266	221	246	173	177	205	242	210
2015/16	211	194	208	166	170	174	185	173
2015 – September	218	195	223	166	161	175	184	177
2015 – October	221	208	224	164	164	186	193	182
2015 – November	211	201	210	166	167	179	185	173
2015 – December	212	191	193	164	166	178	182	170
2016 – January	214	192	194	161	161	167	176	165
2016 – February	205	189	194	160	167	164	170	165
2016 – March	207	189	192	159	163	164	172	161
2016 – April	201	193	199	164	170	166	170	162
2016 – May	193	189	202	169	187	166	176	153
2016 – June	198	186	210	181	197	162	183	170
2016 – July	188	168	210	161	179	154	169	147
2016 – August	188	157	215	150	177	157	147	140
2016 – September	188	158	201	148	171	152	138	141

[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.

APPENDIX TABLE 21: TOTAL **WHEAT AND MAIZE** FUTURES PRICES

	December		March		May		July	
	Dec. 2016	Dec. 2015	Mar. 2017	Mar. 2016	May 2017	May 2016	July 2017	July 2016
	(USD/tonne)							
Wheat								
August 22	160	185	168	187	174	188	177	188
August 29	146	178	155	181	160	183	163	184
Sept 5	146	172	154	175	159	177	163	179
Sept 12	150	178	158	181	163	183	167	185
Sept 19	148	179	156	181	161	183	165	185
Sept 26	146	187	154	189	159	191	163	192
Maize								
August 22	135	149	139	153	141	155	144	157
August 29	126	148	130	152	133	155	136	156
Sept 5	125	143	129	147	133	150	136	152
Sept 12	133	152	138	157	141	160	143	161
Sept 19	133	149	137	153	140	156	145	158
Sept 26	130	153	133	158	136	160	139	162

Source: Chicago Board of Trade (CBOT)

APPENDIX TABLE 22: **SELECTED INTERNATIONAL PRICES FOR RICE AND PRICE INDICES**

	International prices				FAO indices				
						Indica			
Period	**Thai 100% B[1]**	**Thai broken [2]**	**US long grain [3]**	**Pakisan Basmati[4]**	**Total**	**Higher quality**	**Lower quality**	**Japonica**	**Aromatic**
Annual (Jan/Dec)	*(USD per tonne)*				*(2002-2004=100)*				
2009	587	329	545	937	253	224	196	317	231
2010	518	386	510	881	227	206	212	252	229
2011	565	464	577	1060	242	232	250	258	220
2012	588	540	567	1137	231	225	241	235	222
2013	534	483	628	1372	233	219	226	230	268
2014	435	322	571	1324	235	207	201	266	255
2015	395	327	490	849	211	184	184	263	176
Monthly									
2015 – September	367	316	491	855	206	176	176	266	168
2015 – October	376	323	497	661	199	179	175	251	154
2015 – November	380	329	500	621	196	180	178	244	146
2015 – December	373	332	490	716	197	180	181	242	152
2016 – January	375	331	474	734	195	179	181	240	149
2016 – February	389	339	466	745	197	180	181	244	148
2016 – March	392	343	452	681	196	180	184	242	142
2016 – April	401	351	440	679	195	181	187	236	145
2016 – May	448	355	442	750	199	191	195	230	151
2016 – June	456	356	448	825	198	191	198	223	159
2016 – July	457	362	454	907	200	193	199	222	166
2016 – August	435	367	448	863	195	186	192	221	161
2016 – September	399	358	421	836	190	174	184	221	157

[1] White rice, 100% second grade, f.o.b. Bangkok, indicative traded prices.
[2] A1 super, f.o.b. Bangkok, indicative traded prices.
[3] US No.2, 4% brokens f.o.b.
[4] Up to May 2011: Basmati ordinary, f.o.b. Karachi; from June 2011 onwards: Super Kernel White Basmati Rice 2%.

Note: The FAO Rice Price Index is based on 16 rice export quotations. 'Quality' is defined by the percentage of broken kernels, with higher (lower) quality referring to rice with less (equal to or more) than 20 percent brokens. The sub-index for Aromatic Rice follows movements in prices of Basmati and Fragrant rice.
Sources: FAO for indices. Rice prices: Livericeindex.com, Thai Department of Foreign Trade (DFT) and other public sources.

APPENDIX TABLE 23: SELECTED INTERNATIONAL PRICES FOR OILCROP PRODUCTS

Period	International prices[1]					FAO indices[7]		
	Soybeans [2]	Soybean oil [3]	Palm oil [4]	Soybean cake [5]	Rapeseed meal [6]	Oilseeds	Vegetable oils	Oilcakes/meals
	(USD per tonne)					(2002-2004=100)		
Annual (Oct/Sept)								
2004/05	275	545	419	212	130	104	103	101
2005/06	259	572	451	202	130	100	107	96
2006/07	335	772	684	264	184	129	150	128
2007/08	549	1325	1050	445	296	216	246	214
2008/09	422	826	627	385	196	157	146	179
2009/10	429	924	806	388	220	162	177	183
2010/11	549	1308	1147	418	279	214	259	200
2011/12	562	1235	1051	461	295	214	232	219
2012/13	563	1099	835	539	345	213	193	255
2013/14	521	949	867	534	324	194	189	253
2014/15	407	777	658	406	270	155	153	194
2015/16	396	773	655	351	232	151	155	168
Monthly								
2014 - January	566	935	871	539	337	208	189	256
2014 - February	594	991	911	571	361	219	198	271
2014 - March	501	1001	959	582	396	193	205	278
2014 - April	516	1005	911	563	375	198	199	269
2014 - May	522	973	896	552	340	197	195	263
2014 - June	514	933	859	531	304	192	189	251
2014 - July	480	886	839	477	272	178	181	226
2014 - August	457	855	755	485	265	170	167	229
2014 - September	433	850	714	463	265	162	162	219
2014 - October	430	835	724	463	258	161	164	218
2014 - November	447	827	728	485	265	167	165	228
2014 - December	446	816	694	449	278	168	161	213
2015 - January	421	789	681	431	279	159	156	206
2015 - February	407	775	693	412	273	154	157	197
2015 - March	402	748	673	392	262	152	152	188
2015 - April	396	753	657	380	263	151	150	183
2015 - May	385	781	663	371	290	148	154	180
2015 - June	397	800	670	372	282	152	156	180
2015 - July	413	746	635	389	264	157	148	186
2015 - August	375	729	544	371	270	144	135	179
2015 - September	367	725	533	362	256	142	134	174
2015 - October	377	743	581	351	255	146	143	170
2015 - November	367	726	561	328	232	142	138	159
2015 - December	372	757	568	317	215	144	141	153
2016 - January	368	722	564	316	217	142	139	152
2016 - February	370	762	639	303	203	142	150	146
2016 - March	379	761	694	301	219	145	160	145
2016 - April	398	797	723	339	242	152	166	163
2016 - May	425	790	708	406	261	160	163	193
2016 - June	455	797	679	430	259	169	162	204
2016 - July	429	790	652	400	234	159	157	189
2016 - August	414	812	736	375	228	156	169	178
2016 - September	404	823	758	346	221	153	172	165

[1] Spot prices for nearest forward shipment

[2] Soybeans: US, No.2 yellow, c.i.f. Rotterdam.

[3] Soybean oil: Dutch, fob ex-mill.

[4] Palm oil: Crude, c.i.f. Northwest Europe.

[5] Soybean cake: Pellets, 44/45 percent, Argentina, c.i.f. Rotterdam.

[6] Rapeseed meal: 34 percent, Hamburg, f.o.b. ex-mill.

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

Sources: FAO and Oil World.

APPENDIX TABLE 24: **SELECTED INTERNATIONAL PRICES FOR MILK PRODUCTS AND DAIRY PRICE INDEX**

	International prices				FAO dairy price index
Period	**Butter [1]**	**Skim milk powder [2]**	**Whole milk powder [3]**	**Cheddar cheese [4]**	
Annual (Jan/Dec)	..... *(USD per tonne)*				... *(2002-2004=100)* ...
2007	3 337	4 336	4 354	4 055	220
2008	3 701	3 251	3 891	4 633	223
2009	2 736	2 332	2 556	2 957	150
2010	4 270	3 081	3 514	4 010	207
2011	4 876	3 556	4 018	4 310	230
2012	3 547	3 119	3 358	3 821	194
2013	4 484	4 293	4 745	4 402	243
2014	4 010	3 647	3 868	4 456	224
2015	3 212	2 113	2 509	3 340	160
Monthly					
2015 - September	2 882	1 838	2 148	3 000	142
2015 - October	3 104	2 057	2 597	3 167	156
2015 – November	2 978	1 949	2 420	3 150	151
2015 - December	3 069	1 859	2 279	3 150	150
2016 - January	3 038	1 818	2 134	3 069	145
2016 - February	3 001	1 791	2 094	2 988	142
2016 - March	2 742	1 740	2 058	2 650	130
2016 – April	2 657	1 733	2 046	2 575	127
2016 - May	2 657	1 735	2 064	2 588	128
2016 - June	2 799	1 879	2 192	2 825	138
2016 - July	3 051	1 937	2 284	2 844	142
2016 – August	3 296	1 990	2 506	3 119	155
2016 - September	3 926	2 248	2 831	3 504	176

[1] Butter, 82% butterfat, f.o.b. Oceania and EU; average indicative traded prices
[2] Skim Milk Powder, 26% butterfat, f.o.b. Oceania and EU, average indicative traded prices
[3] Whole Milk Powder, 1.25% butterfat, f.o.b. Oceania and EU, average indicative traded prices
[4] Cheddar Cheese, 39% 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)

APPENDIX TABLE 25: **SELECTED INTERNATIONAL MEAT PRICES**

	Bovine meat prices			Ovine meat price	Pig meat prices			Poultry meat prices	
Period	Australia	United States	Brazil	New Zealand	United States	Brazil	Germany	United States	Brazil
Annual (Jan/Dec)	*(USD per tonne)*								
2007	2 544	4 023	2 367	2 498	2 117	2 200	1 907	935	1 443
2008	3 024	4 325	3 785	2 975	2 270	3 000	2 364	997	1 896
2009	2 562	3 897	3 118	3 495	2 202	2 223	2 035	989	1 552
2010	3 272	4 378	3 919	3 662	2 454	2 747	1 913	1 032	1 781
2011	3 944	4 516	4 816	5 370	2 648	3 023	2 169	1 147	2 083
2012	4 176	4 913	4 492	4 754	2 676	2 784	2 233	1 228	1 931
2013	4 009	5 535	4 326	4 130	2 717	2 872	2 311	1 229	2 014
2014	5 016	6 678	4 515	4 687	3 183	3 434	2 106	1 206	1 940
2015	4 638	6 201	4 130	3 641	2 576	2 499	1 582	1 003	1 642
Monthly									
2015 - September	4 866	5 820	4 364	3 626	2 437	2 508	1 679	946	1 587
2015 - October	4 066	5 484	3 939	4 017	2 328	2 471	1 634	917	1 552
2015 – November	4 016	5 560	4 164	3 682	2 338	2 219	1 424	909	1 538
2015 - December	3 787	5 742	3 990	3 491	2 380	1 924	1 402	866	1 484
2016 - January	3 796	5 476	3 722	3 228	2 310	1 823	1 447	868	1 392
2016 - February	4 021	5 644	3 724	3 103	2 251	1 783	1 467	871	1 392
2016 - March	3 887	5 686	3 556	3 091	2 228	1 768	1 480	892	1 413
2016 – April	4 001	5 670	3 721	3 188	2 276	1 904	1 496	931	1 448
2016 - May	4 187	5 360	3 769	3 307	2 253	2 071	1 644	984	1 533
2016 - June	4 175	5 541	3 772	3 700	2 398	2 131	1 792	998	1 581
2016 - July	4 378	5 356	3 754	3 690	2 511	2 148	1 868	940	1 628
2016 – August	4 224	5 340	3 990	3 846	2 530	2 218	1 903	925	1 646
2016 - September	4 094	5 350	4 030	3 824	2 560	2 240	1 944	922	1 656

Bovine meat prices:
Australia: Cow 90CL export prices to the USA (FAS)
USA: Frozen beef, export unit value
Brazil: Frozen beef, export unit value

Ovine meat prices
New Zealand: Lamb 17.5kg cwt, export price

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

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

Prices for the two most recent months may be estimates and subject to revision.

APPENDIX TABLE 26: SELECTED INTERNATIONAL MEAT PRICES AND FAO MEAT PRICE INDICES

	FAO indices				
Period	**Total meat**	**Bovine meat**	**Ovine meat**	**Pig meat**	**Poultry meat**
Annual (Jan/Dec)	*(2002-2004=100)*				
2007	131	126	108	125	151
2008	161	158	128	152	184
2009	141	135	151	131	162
2010	158	165	158	138	179
2011	183	191	232	153	206
2012	182	195	205	153	201
2013	184	197	178	157	206
2014	198	231	202	164	200
2015	168	213	157	126	168
Monthly					
2015 - September	168	216	157	127	161
2015 - October	158	192	173	123	157
2015 – November	155	195	159	113	156
2015 - December	150	191	151	110	150
2016 - January	145	184	139	109	144
2016 - February	147	190	134	108	144
2016 - March	146	186	133	108	147
2016 – April	150	190	138	111	151
2016 - May	154	190	143	117	160
2016 - June	160	192	160	126	164
2016 - July	162	193	159	130	163
2016 – August	163	194	166	133	164
2016 - September	163	192	165	135	164

The FAO Meat Price Indices consist of 2 poultry meat product quotations (the average weighted by assumed fixed trade weights), 3 bovine meat product quotations (average weighted by assumed fixed trade weights), 3 pig meat product quotations (average weighted by assumed fixed trade weights), 1 ovine meat product quotation (average weighted by assumed fixed trade weights): the four meat group average prices are weighted by world average export trade shares for 2002/2004.

Prices for the two most recent months may be estimates and subject to revision.

APPENDIX TABLE 27: **FISH PRICE INDICES**

Period	Total	Aquaculture	Capture	White fish	Salmon	Shrimp	Pelagic excl. tuna	Tuna	Other fish
Annual (Jan/Dec)					*(2002-2004=100)*				
2006	117	114	119	128	144	100	124	118	120
2007	124	115	132	139	147	102	130	135	126
2008	136	120	148	151	151	109	148	162	133
2009	126	119	131	132	159	98	140	147	128
2010	137	137	136	138	187	109	144	146	146
2011	154	149	157	151	195	124	173	175	166
2012	144	124	157	145	146	107	207	195	176
2013	148	141	151	134	157	126	215	190	175
2014	157	158	153	142	159	148	210	175	185
2015	142	137	146	141	134	129	216	150	196
Monthly									
2015 - January	150	149	151	143	143	139	244	159	198
2015 - February	146	146	146	139	139	132	241	153	208
2015 - March	143	141	145	139	135	128	234	150	196
2015 - April	143	137	149	141	133	125	240	150	208
2015 - May	145	145	146	141	135	132	232	148	208
2015 - June	144	140	147	142	137	129	207	152	202
2015 - July	135	129	139	142	132	115	194	145	195
2015 - August	139	130	146	144	132	123	216	146	194
2015 - September	141	129	151	143	129	128	218	161	179
2015 - October	141	133	147	143	129	133	218	146	188
2015 - November	138	130	142	138	129	134	176	143	182
2015 - December	141	134	144	141	139	131	173	144	197
2016 - January	140	136	141	137	141	126	189	142	193
2016 - February	142	140	142	140	144	123	201	150	191
2016 - March	144	144	143	140	151	124	204	148	188
2016 - April	143	144	142	143	157	122	209	146	183
2016 - May	142	147	139	144	162	117	169	150	192
2016 - June	147	149	145	145	170	125	201	150	197

Source= Norwegian Seafood Council (NSC).

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

APPENDIX TABLE 28: **SELECTED INTERNATIONAL COMMODITY PRICES**

	Currency and unit	Effective date	Latest quotation	One month ago	One year ago	Average 2011-2015
Sugar (ISA daily price)	US cents per lb	29-09-16	22.86	20.79	11.86	19.13
Coffee (ICO daily price)	US cents per lb	27-09-16	139.72	131.57	113.14	153.23
Cocoa (ICCO daily price)	US cents per lb	27-09-16	131.09	137.94	148.71	127.10
Tea (FAO Tea Composite Price)	USD per kg	31-08-16	2.58	2.65	2.81	2.77
Cotton (COTLOOK A index)	US cents per lb	26-09-16	79.20	80.48	68.74	97.60
Jute "BTD" (Fob Bangladesh Port)	USD per tonne	30-08-16	690.00	820.00	680.00	624.58

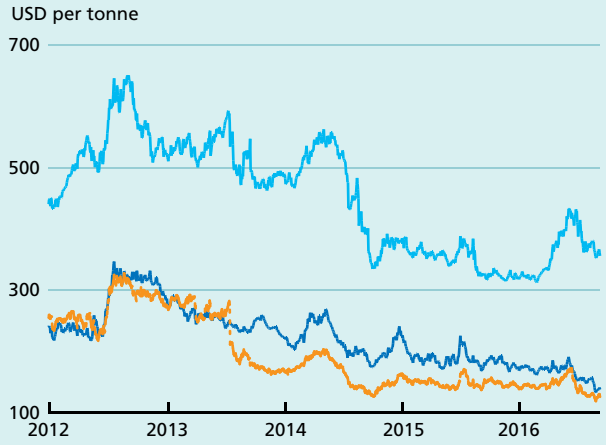
MARKET INIDCATORS

Futures markets

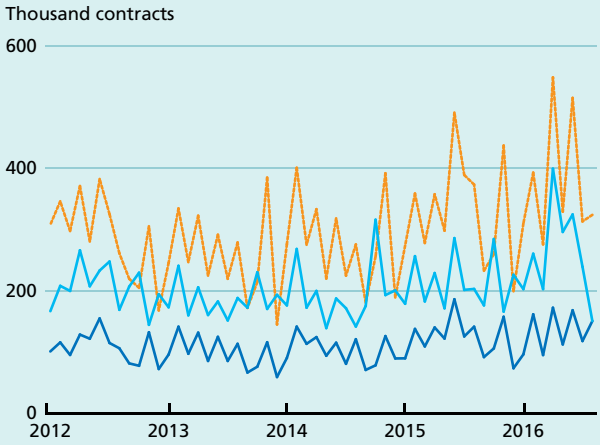
Contributed by Ann Berg (International Consultant)

Futures prices for wheat, maize and soybeans declined steadily between June and September following a brief run-up in April and May when South American weather developments threatened production. Wheat prices declined to multi-year lows, as global supplies appeared ample. The USDA, citing other origin export competition, predicted 2016/17 domestic farm prices would drop below USD 143 per tonne, their lowest level in 11 years. Maize futures prices also declined to multi-year lows on expectation of a bumper crop in the United States. Soybean prices remained on average higher than the previous year for the same period, but substantially below 2013 levels. Despite the record soybean harvest projected for 2016/17, heightened domestic and Asian export demand were moderately supportive of prices. Exogenous markets, such as foreign exchange and energy, exhibited some stability compared with 2014 and 2015, which was a period of dramatic price adjustments. Nonetheless, relative USD strength and low crude oil prices remained a weight on overall commodity prices. A strong pace for US exports since early June indicated that lower cereal and oilseed prices were finding a clearing level for demand.

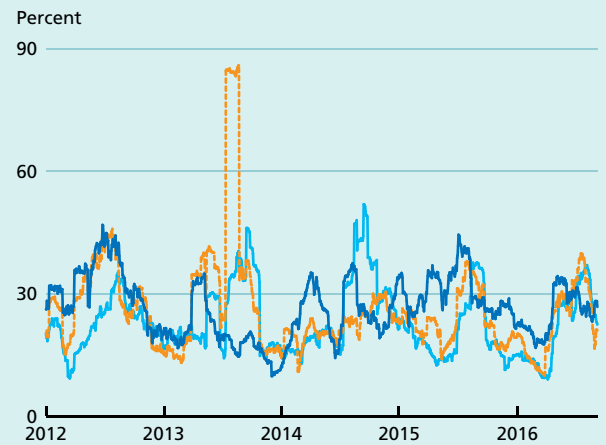
CME futures prices



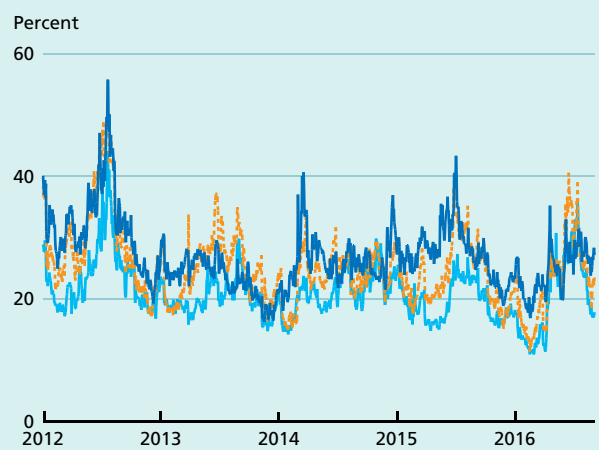
CME futures volumes



Historical volatility (30 days)



Implied volatility



FORWARD CURVES

Forward curves for wheat and maize displayed unusually steep upward sloping (contango) price configurations extending to December 2017. For maize, the December 2016/December 2017 spread exhibited USD 16 per tonne carry versus USD 8 per tonne the previous year. For wheat, the December 2016/December 2017 spread displayed USD 28 per tonne carry versus USD 14 per tonne the previous year. These wide curves reflected, in part, the insufficient capacity for storing the 2016/2017 maize crop following the large wheat harvest. The forward curve for soybeans, however, was flat to downward sloping with the November 2016/November 2017 spread displaying USD 5 inversion (backwardation). In September 2016, the USDA revised the 2015/2016 stocks-to-use ratio downward, to less than 5 percent (from 12.5 percent projected earlier) which reflected greater than expected end-year export demand. The dwindling carryout explained the extremely high year-end basis levels and old crop/new crop futures inversion that began with the July 2016 contract. The current November 2016/November 2017 inversion may reflect a perception of understated demand again for the 2016/2017 crop year, and producer preference for storing soybeans over wheat or maize. Deliveries were made against the September contracts for maize and wheat, but not for soybeans, even as the September contract rose to USD 11 per tonne premium to November, expiring at approximately the same level as the cash price.

VOLUMES

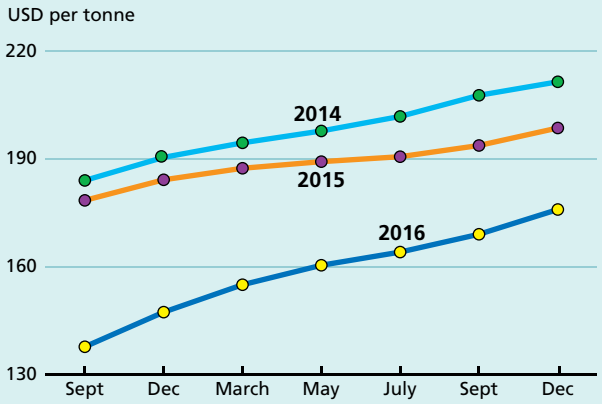
Trade volumes for wheat, maize and soybeans continued strong following a record year in 2015. Maize and soybean volumes were on track to surpass last year's levels while wheat volumes appeared to be on a match course. While lower than April's record when prices spiked briefly, monthly volumes have remained elevated despite price erosion and slumping volatilities, indicators normally linked to low volumes. Open interest was mixed: soybeans displayed record numbers of outstanding contracts during April, May and June, while wheat and maize remained below the record numbers recorded in 2012. This might indicate that many producers facing maize and wheat prices at multi-year lows rejected "locking in" prices, and that the high volumes were mostly the result of speculative activity.

VOLATILITY

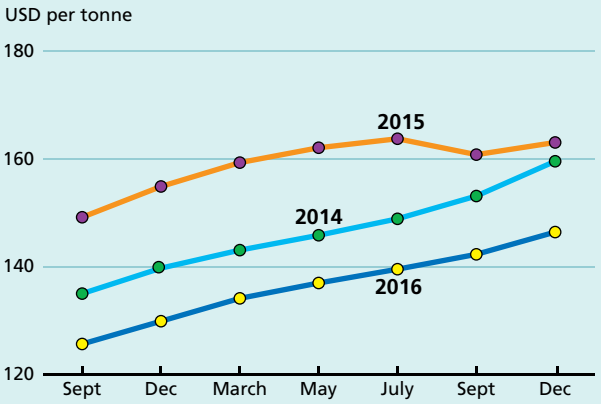
Volatility levels for maize and soybeans tended to track US crop development, peaking in June and July as prospects

Forward curves snapshots as of 13 September 2014, 2015 and 2016

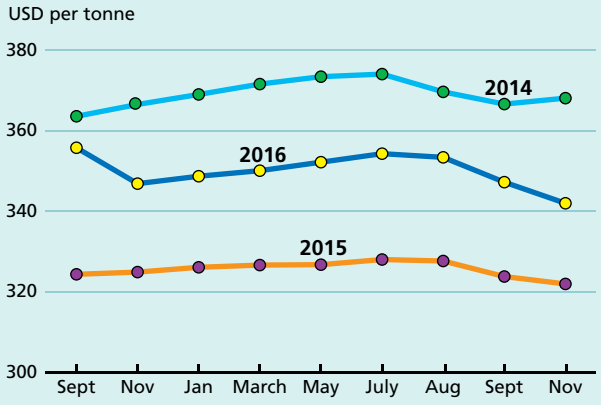
Wheat



Maize



Soybeans

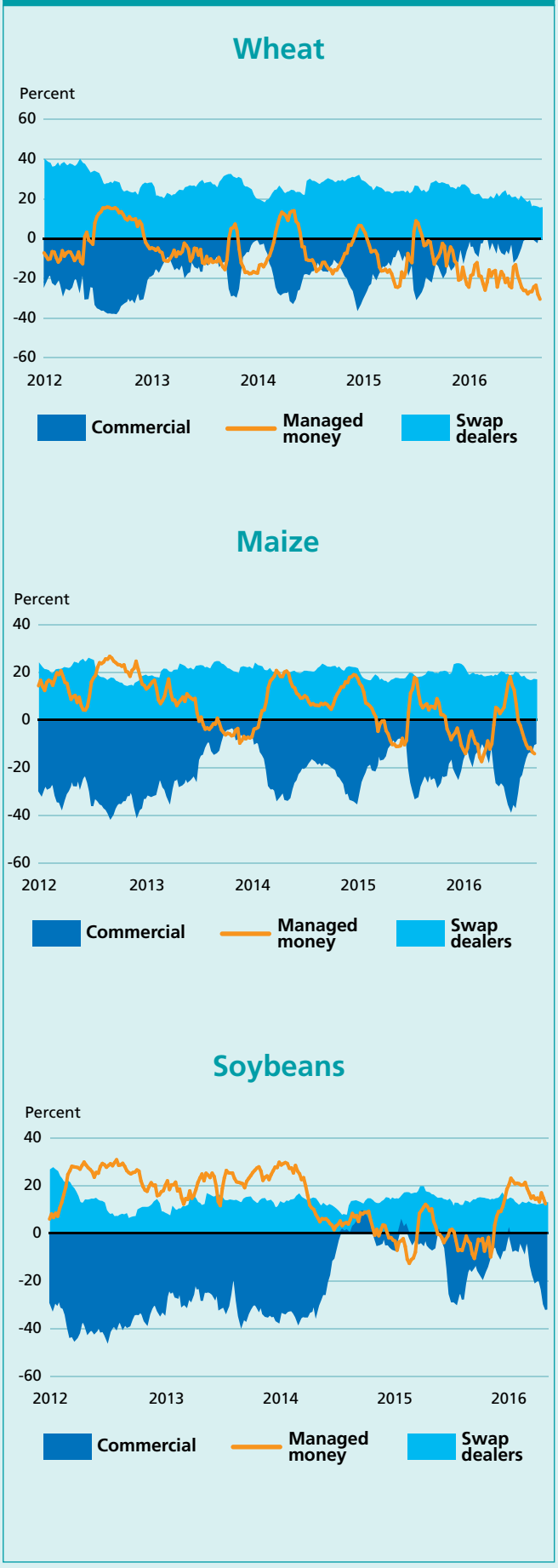


turned increasingly favourable for record harvests. Historical volatility (based on 30 days) for maize and soybeans reached 37 and 33 respectively, declining to the low 20s by September. Implied volatility (calculated by the level of option premiums on underlying futures contracts) followed a similar upward path and fell to 23 (maize) and 17 (soybeans) during September. Wheat followed a slightly different course as historical volatility peaked in May at 33 and hovered in the upper 20s during the subsequent months, while implied volatility rose in May from 24 to the upper 20s between June and September. Overall levels were unremarkable compared with other time periods. For example, historical volatility reached a low of 11 during March 2016 (maize and soybeans) and a three-year high (maize) in August 2013 of 71. Grain price volatility continued to be insulated from crude oil volatility which, as tracked by the Volatility Index Exchange Traded Fund (ETF, listed on the Chicago Board of Options), soared to 80 in February and March 2016, and thereafter drifted down to the high 30s to low 40s.

INVESTMENT FLOWS

Managed money and commercial traders actively exchanged position strategies over the course of the past several months, as charts reveal mirror images of their net buying and selling. In wheat, managed money maintained its net short for a 12-month period, raising the level to 30 percent of open interest in September, a record over the life of the CFTC reporting period (since 2006). Commercials, also a net short for most of the past year, reversed their position to a net long during July. Swaps dealers, a perennial large net long in wheat, reduced their position to a record low 15 percent of open interest by September, possibly indicating a client withdrawal of funds due to five years of negative returns. In maize, managed money and commercials took opposite strategies during June, establishing large net long and short positions respectively. Reversing those sharply in July, both ended up as moderate net shorts in September. In soybeans, managed money has maintained a net long to varying degrees since March, while commercials maintained a net short. Despite its aggressive buying and selling and seemingly successful year-long strategy of betting on a wheat price decline, managed money involved with agricultural products returned a YTD negative performance of 1.83 percent (January through April), according to the hedge fund tracker Barclay Hedge. Passively managed index funds, notably the Deutsche Bank Agricultural Index Fund, have lost value for five consecutive years, yielding a negative 9 percent return for the period.

CME net-length as % of open interests (Jan 2012 - Sep 2016)



Ocean freight rates

Contributed by the International Grains Council (IGC)
www.igc.int

OCEAN FREIGHT MARKET (SEPTEMBER 2015 - SEPTEMBER 2016)

After reaching an all-time low in the first half of February, dry bulk freight markets continued to stage a recovery in the past six months, although volatility was often a feature. The Baltic Dry Index (BDI), a composite index of activity on benchmark routes, touched an eleven-month peak of 804 points in September and, despite easing slightly in recent days, was still up by more than 90% when compared to mid-March. As the data show, gains were underpinned by strength in all segments, but were steepest in the Capesize sector. Nevertheless, highlighting underlying pressure from industry oversupply and wider macroeconomic concerns, the BDI was down by 6% y/y.

Being associated with the transportation of coal, iron ore and a range of other heavy raw materials, the **Capesize** sector is most closely linked to the broader economic cycle. During the past six months, rates in this segment trended significantly higher, the Baltic sub-Index posting a net increase of more than 700%. However, day-to-day swings in sentiment were sometimes especially pronounced, with periods of heightened activity at key origins – including Australia and Brazil – contrasting with a relatively subdued market at other times. Compared to the same point of 2015, values were up by almost one-quarter y/y.

While the grains and oilseeds carrying sectors advanced solidly, gains were markedly less pronounced than in the Capesize sector. Although the **Panamax** market was often volatile, it was much firmer when compared to six months earlier. Activity at the US Gulf was initially slow, but values during March-April were supported by good demand for grains and oilseeds new crop shipments from South America, with underpinning, too, from tonnage tightness in other regions.

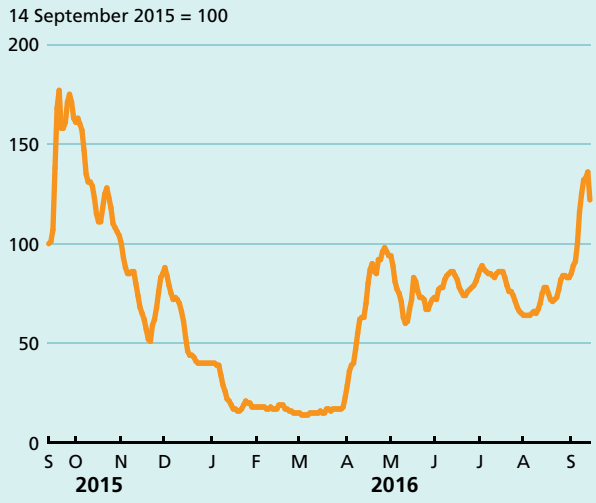
In recent months, there was marked uptick in business volumes in the northern hemisphere – especially in the North Atlantic and Black Sea region – as importers sought to book the dispatch of freshly harvested supplies. Despite

Summary of dry bulk freight markets

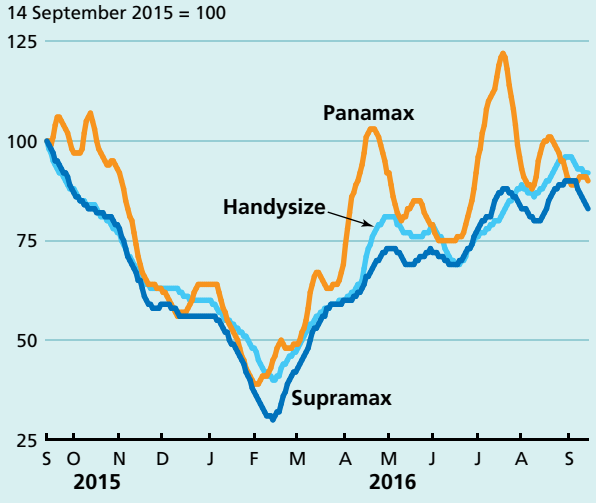
	14 Sept. 2016	Changes	
		6 months	y/y
		%	
Baltic Dry Index (BDI)*	**756**	92.4	-6.1
Sub-indices:			
Capesize	**1 444**	706.7	21.9
Panamax	**649**	34.9	-10.2
Supramax	**665**	55.7	-16.8
Handysize	**415**	64.7	-8.2

Source: Baltic Exchange, * 4 January 1985 = 1000

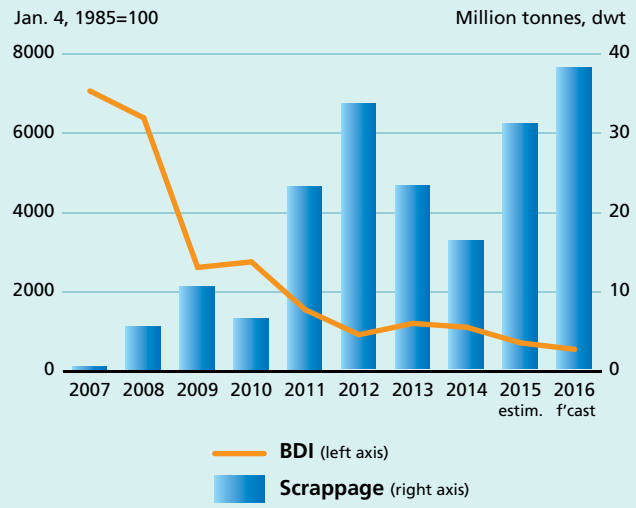
Baltic Capesize sub-Index (14 Sep 2015 - 14 Sep 2016)



Baltic Exchange sub-Indices – Grains and oilseeds carrying sectors (14 Sep 2015 - 14 Sep 2016)



Dry bulk freight markets: BDI (annual averages) vs scrappage, 2007-2016 *



* Source: Bulk Shipping Analysis; refers to vessels above 10,000t dead weight, including Handysize, Supramax, Panamax, Capesize and larger carriers.

Summary of freight rates on selected routes

USD/t	14 Sep. 2016	Changes	
		6 months	y/y
US (Gulf) to:		%	
EU (ARAH)	**18**	80.0	38.5
China (Dalian)	**31**	34.8	-4.6
Japan	**30**	36.4	-3.2
Canada (St. Lawrence) to:			
EU (ARAH)	**13**	62.5	0.0
China (Dalian)	**34**	17.2	-10.5
Japan	**36**	16.1	-12.2
Argentina to:			
EU (ARAH)	**14**	27.3	-22.2
Mexico	**21**	23.5	-19.2
Brazil to:			
EU (ARAH)	**22**	22.2	-18.5
China (Dalian)	**17**	13.3	...
EU (France, Rouen) to:			
Algeria	**18**	50.0	-14.3
Egypt (Mediterranean)	**19**	26.7	-13.6
Black sea to:			
Egypt (Alexandria)	**15**	66.7	0.0
Tunisia	**18**	50.0	-5.3
Australia (East Coast) to:			
China (Dalian)	**13**	44.4	0.0
Yemen	**31**	19.2	0.0

EU (ARAH) refers to Antwerp, Rotterdam, Hamburg

a recovery in rates since the middle of March, the Baltic sub-Index was still down by 10% on a year ago.

Concerning nominal and reported rates on key trading routes, a trip from Brazil to southern China as at mid-September was typically around US$17/t. While this represented an increase of 13% on six months earlier, it was US$3/t lower than its early-July peak. In contrast, a voyage from the US Gulf to the same destination was up by around 35% from mid-March, broadly mirroring the movement in the overall sub-Index for the Panamax segment. On the Argentina-EU (ARAH) route, quotations were in the region of US$14/t, up by about one-quarter.

After bottoming out in the first quarter, **Supramax** and **Handysize** markets turned higher, the Baltic sub-Indices for each rising by 56% and 65%, respectively. As the accompanying chart illustrates, rates were evidently less volatile than those for larger vessels. Scrap and fertiliser business in Europe provided a degree of support at times, while demand for new crop supplies underpinned values in South America through to mid-year. More recently, a boost in enquiries from importers for freshly cut crops in Black Sea producers added to the positive tone, offsetting some pressure from subdued activity in the EU, where the traditional summer slowdown weighed. However, rates remained lower when compared to a year earlier.

Supply-side developments

Aside from demand-side developments, the heavy expansion of the global dry bulk fleet has been a constant source of pressure over a number of years. However, there is now evidence that, despite a mild recovery during recent months, historically low freight rates are encouraging an increase in scrapping volumes.

The above table provides a snapshot of developments on major grains and oilseeds trade routes, and highlights changes in rates on six months earlier and one year ago.

Food import bills

World food import bill in 2016 falling to a six-year low

At USD 1.17 trillion, the value of total food imports in 2016 is forecast to decline by 11 percent, or USD 148 billion, from last year, marking the largest annual fall in absolute terms in recent history, to a level not witnessed since 2010. The June *Food Outlook* report had foreseen global import expenditures on foodstuffs dipping below USD 1 trillion in 2016. However, revisions to historical data, combined with higher than anticipated freight rates and larger volumes and prices for several commodities, now suggest that the global food import bill will not likely fall below the USD 1 trillion mark. Nevertheless, both sizeable and widespread falls in the commodity basket are likely to characterize 2016.

The volatility in freight costs, especially over the past 12 months, is noteworthy. For instance, as indicated by the Baltic Dry Index, shipping charges in the third quarter of 2016 are down almost a third compared with the corresponding period of last year, but have risen by over 90 percent from the first quarter of 2016. Taking wheat destined for East Asian markets as an example, importers would now be required to pay, on average, 5 percent more than in January owing to the freight increase.

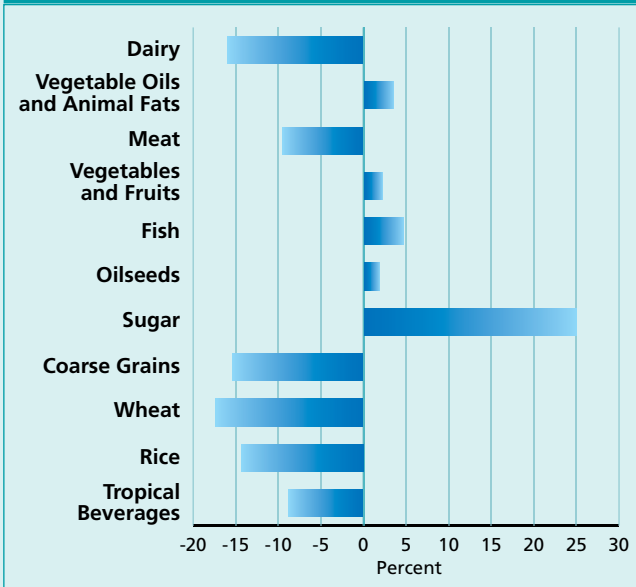
Turning to developments at the product level, the import bills anticipated to undergo the largest absolute declines in 2016 are those for livestock products and cereal-based foodstuffs, which could fall by around USD 27 billion, or 12 percent, and USD 25 billion, or 16 percent, respectively. In the case of livestock, considerably lower quotations compared with last year are driving expenditures on these food groups down, even though import volumes of meat are forecast to reach a record high in 2016 and those of dairy products likely to be at a near-high level. As for cereals, lower international prices, coupled with a decline in traded volumes, are foreseen to curb import bills for this commodity group.

Commodity import bills that could instead increase in 2016 include sugar (+ USD 10 billion), fish (+ USD 6 billion), fruit and vegetables (+ USD 5 billion), and vegetable oils (+ USD 3 billion). In all of these cases, international benchmark quotations are above the 2015 levels, and import volumes are set to exceed those of last year.

The tendency at the world level for substantially lower import costs in 2016 does not necessarily extend to many of the economically vulnerable nations. The food import bills of least-developed countries (LDCs), low-income food-deficit countries (LIFDCs) and those geographically situated in sub-Saharan Africa (SSA) are forecast to fall by less than the 11 percent global decline, with falls ranging between only 5 and 9 percent among the country groups. For all of these economically disadvantaged countries, higher import volumes of products in the oilseed complex, as well as of sugar and cereals, particularly maize, are seen to offset the gains to be made from lower import bills of other product groups. In some cases, particularly for countries in SSA as well as LIFDCs, the larger maize purchases are in response to shortfalls in the domestic production of the staple.

Despite the general decline of the US dollar-denominated food bills in 2016, a different picture emerges when denominated in local currencies, given the prevailing strength of the US dollar. Although having stabilized in recent months, the US dollar remains exceptionally strong, keeping the cost of food imports high from a local currency perspective and adding strain to scarce foreign exchange reserves from which the cost of importing is met.

Forecast changes in global food import bills by type (2016 over 2015)



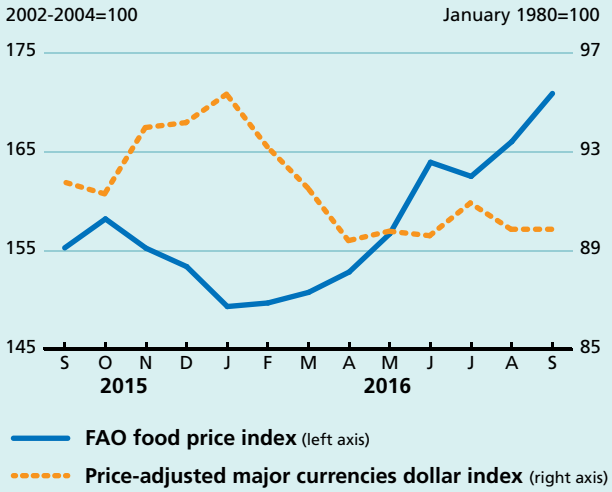
Contact:
Adam.Prakash@fao.org

Import bills of total food and major foodstuffs (USD billion)

	World		Developed		Developing		LDC		LIFDC		Sub-Saharan Africa	
	2015	2016 f'cast	2015	2016 f'cast	2015	2016 f'cast	2015	2016 f'cast	2015	2016 f'cast	2015	2016 f'cast
TOTAL FOOD	**1 316.1**	**1 167.9**	**795.1**	**694.5**	**521.0**	**473.5**	**37.8**	**34.4**	**81.3**	**77.4**	**41.9**	**37.6**
Vegetables and Fruits	237.7	242.8	168.8	172.2	68.9	70.6	3.7	4.0	12.5	13.0	3.3	3.4
Cereals	162.0	136.6	71.4	60.8	90.7	75.8	11.0	9.6	18.6	16.3	11.9	10.8
Fish	122.7	128.3	87.6	92.5	35.1	35.8	1.0	1.0	3.9	4.0	4.0	4.1
Meat	149.5	134.7	96.5	86.3	53.0	48.4	2.7	2.2	3.4	2.9	3.4	3.0
Dairy	77.4	65.1	47.6	40.2	29.8	24.9	2.1	1.8	3.6	2.9	2.2	1.7
Vegetable Oils and Animal Fats	89.8	93.0	40.1	41.5	49.8	51.5	5.8	6.1	18.2	19.4	4.5	4.7
Oilseeds	78.1	79.5	24.1	24.3	54.0	55.1	0.5	0.6	1.0	1.0	0.4	0.4
Sugar	43.9	54.9	22.6	28.1	21.4	26.8	3.6	4.5	5.7	7.1	3.3	4.0
Tropical beverages	102.0	93.2	77.2	70.4	24.9	22.7	1.5	1.4	3.7	3.4	1.6	1.4

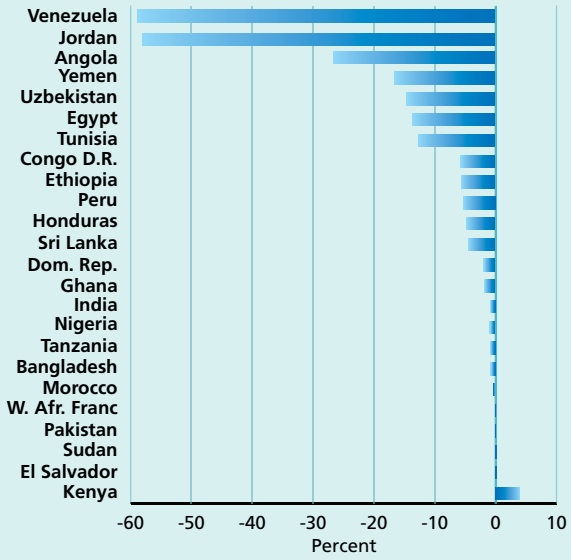
Exchange rates and food prices

USD remains high but stable, as food prices climb (Sep 2015 - Sep 2016)



Source: US Federal Reserve

% changes in the currencies of selected LIFDCs against the USD (Sep 2015 - Sep 2016)



Having reached a 13-year high at the beginning of 2016, the US Dollar relative to major currencies had lost some ground by the end of the first quarter of this year. Since then, it has been largely stable, with the inflation-adjusted index fluctuating slightly around a level of 90 points. Nevertheless, the US Dollar remains historically strong, rendering the cost of importing expensive as most commodity prices are US Dollar-denominated. This is particularly the case for numerous major food-importing LIFDCs (importing more than USD 1 billion of food annually) who, over September 2015 - September 2016, have incurred currency falls against the US Dollar, with percentage depreciation often reaching double-digit levels.

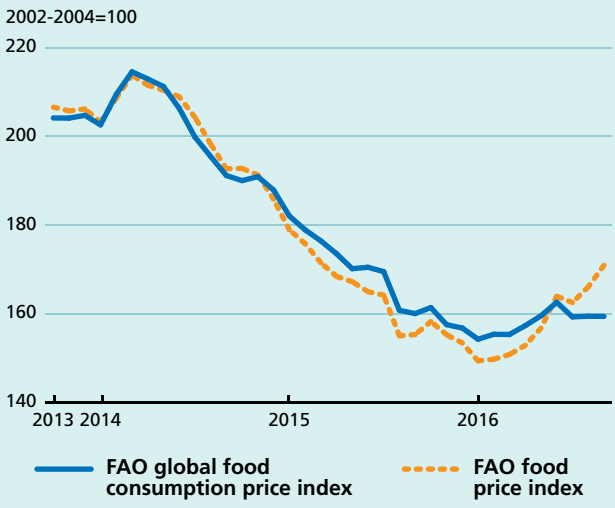
FAO price indices[1]

FAO Global Food Consumption Price Index steady[2]

The **FAO Global Food Consumption Price Index** tracks changes in the cost of the global food basket as depicted by the latest FAO world food balance sheet (see http://faostat3.fao.org/download/FB/FBS/E).

The index has been largely stable after reaching a 12 month high in June 2016. However, it has since diverged from the trade-weighted FAO Food Price Index (FFPI). Averaging 159 points in September, the FAO Global Food Consumption Price Index is 11 points lower than the FPI. This is because prices of basic foodstuffs such as cereals, which carry a much greater weight in consumption have fallen compared to rises in the quotations of higher value traded commodities, notably sugar and dairy.

The FAO global food consumption and food price indices
(Oct 2013 - Sep 2016)



The FAO Food Price Index up again in September[3]

The **FAO Food Price Index** averaged 170.9 points in September 2016, up almost 5 points (2.9 percent) from August and 10 percent above the corresponding month last year. The September value is the highest since March 2015. Barring a small dip in July, the FFPI has been going up steadily since the start of the year, mainly supported by a surge in sugar prices and more moderate increases for dairy products, meat and oils. Last month's rise in the FFPI was driven mostly by stronger dairy and sugar quotations.

The **FAO Cereal Price Index** averaged 140.9 points in September, down 2.7 points (1.9 percent) from August and 8.9 percent below its year-earlier level. The decline in September marked the third consecutive month of decreases, largely due to ample global supplies, especially export availabilities. This year's record wheat production, coupled with an expected rebound in global rice production and above-average performance of coarse grains, maize in particular, have continued to weigh on cereal export quotations.

The **FAO Vegetable Oil Price Index** averaged almost 172 points in September, up 2.9 points (or 1.7 percent) from August, reflecting higher quotations of palm, soy and rapeseed oils. Palm oil values continued to strengthen, underpinned by weaker than anticipated output growth and low stock levels in both exporting and importing countries. International soyoil quotations appreciated on tight global export availabilities, while rapeseed oil prices firmed on concerns about global output falling for a third consecutive year in 2016/17.

The **FAO Dairy Price Index** averaged 176 points in September, up as much as 21 points (13.8 percent) from August. Quotations rose for all dairy products, in particular butter, which was bolstered by reduced stocks and strong internal demand in the EU. The Index has risen by 49 points, 38 percent, since April. The current price surge stems from expectations that falling milk production in the EU and a muted opening to the dairy year in Oceania would result in tighter availabilities for export, following excess supplies in the preceding two years.

[1] All changes referred to in this section, in absolute or percentage terms, are calculated based on unrounded figures.

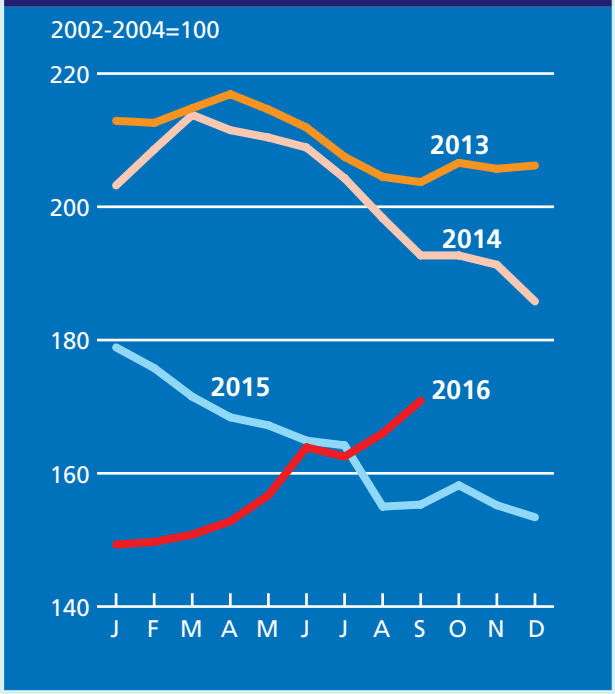
[2] The FAO Global Food Consumption Price Index is published twice a year in *Food Outlook*.

[3] The FAO food price indices are updated on a monthly basis and are available on: http://www.fao.org/worldfoodsituation

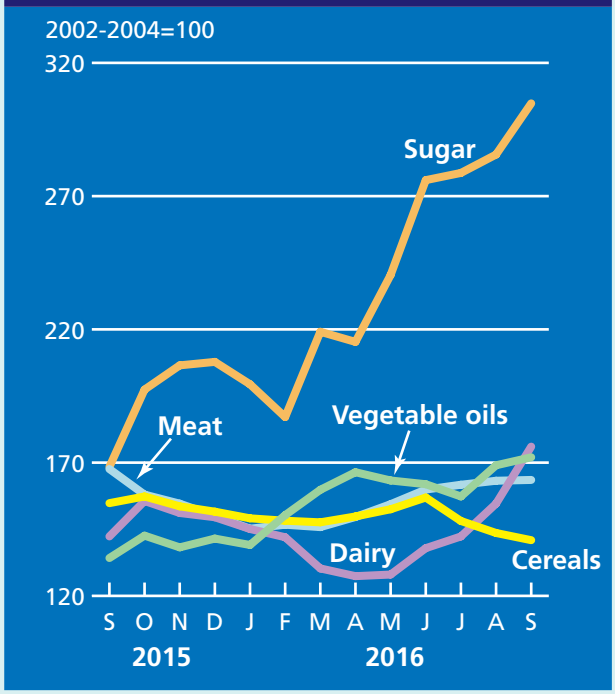
The **FAO Meat Price Index**[4] averaged 163.5 points in September, essentially unchanged from August. Since January, when it hit a five-year low, the Index has risen by 12.6 percent. The largest increase for the year so far has been recorded for pigmeat, followed by ovine and poultry meat, while bovine meat experienced only a limited rise. Firm international demand, in particular from Asia, underpinned pigmeat and poultry meat prices, while reduced international supplies reinforced those of ovine meat. Meanwhile, a recovery in bovine meat production in the United States has reduced the need for imports, contributing to a restrained international price rise for this commodity.

The **FAO Sugar Price Index** averaged 304.8 points in September, up 19 points (6.7 percent) from August, the fifth consecutive monthly increase. The latest surge in international sugar prices was largely on the back of unfavourable weather conditions in the Centre South main producing region in Brazil, the world's largest sugar producer and exporter. Reports of lower production in India, the world's second largest sugar producer, and tight supplies in Thailand and China, also added to the upward pressure on prices.

FAO Food Price Index



FAO Food Commodity Price Indices



[4] Unlike for other commodity groups, most prices utilized in the calculation of the FAO Meat Price Index are not available when the FAO Food Price Index is computed and published; therefore, the value of the Meat Price Index for the most recent months is derived from a mixture of projected and observed prices. This can, at times, require significant revisions in the final value of the FAO Meat Price Index which could in turn influence the value of the **FAO Food Price Index**.

FAO food price index

		Food Price Index[1]	Meat[2]	Dairy[3]	Cereals[4]	Vegetable Oils[5]	Sugar[6]
2000		91.1	96.5	95.3	85.8	69.5	116.1
2001		94.6	100.1	105.5	86.8	67.2	122.6
2002		89.6	89.9	80.9	93.7	87.4	97.8
2003		97.7	95.9	95.6	99.2	100.6	100.6
2004		112.7	114.2	123.5	107.1	111.9	101.7
2005		118.0	123.7	135.2	101.3	102.7	140.3
2006		127.2	120.9	129.7	118.9	112.7	209.6
2007		161.4	130.8	219.1	163.4	172.0	143.0
2008		201.4	160.7	223.1	232.1	227.1	181.6
2009		160.3	141.3	148.6	170.2	152.8	257.3
2010		188.0	158.3	206.6	179.2	197.4	302.0
2011		229.9	183.3	229.5	240.9	254.5	368.9
2012		213.3	182.0	193.6	236.1	223.9	305.7
2013		209.8	184.1	242.7	219.3	193.0	251.0
2014		201.8	198.3	224.1	191.9	181.1	241.2
2015		164.0	168.1	160.3	162.4	147.0	190.7
2015		167.2	172.6	167.5	160.8	154.1	189.3
2015	September	155.3	167.6	142.3	154.8	134.2	168.4
	October	158.2	158.0	155.6	157.3	142.6	197.4
	November	155.2	154.6	151.1	153.6	138.2	206.5
	December	153.4	150.0	149.5	151.6	141.5	207.8
2016	January	149.3	145.2	145.1	149.1	139.1	199.4
	February	149.7	146.7	142.0	148.2	150.3	187.1
	March	150.8	145.8	130.3	147.6	159.8	219.1
	April	152.8	149.6	127.4	149.8	166.4	215.3
	May	156.7	154.4	128.0	152.5	163.3	240.4
	June	163.9	159.9	137.9	156.9	161.9	276.0
	July	162.5	161.7	142.3	148.1	157.3	278.7
	August	166.0	163.2	154.6	143.6	169.0	285.6
	September	170.9	163.5	176.0	140.9	172.0	304.8

1 **Food Price Index:** Consists of the average of 5 commodity group price indices mentioned above, weighted with the average export shares of each of the groups for 2002-2004: in total 73 price quotations considered by FAO commodity specialists as representing the international prices of the food commodities are included in the overall index. Each sub-index is a weighted average of the price relatives of the commodities included in the group, with the base period price consisting of the averages for the years 2002-2004.

2 **Meat Price Index:** Computed from average prices of four types of meat, weighted by world average export trade shares for 2002-2004. Commodities include two poultry products, three bovine meat products, three pig meat products, and one ovine meat product. There are 27 price quotations in total used in the calculation of the index. Where more than one quotation exists for a given meat type, a simple average is used. Prices for the two most recent months may be estimates and subject to revision.

3 **Dairy Price Index:** Consists of butter, SMP, WMP, and cheese 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 International Grains Council (IGC) wheat price index, itself an average of 10 different wheat price quotations, 1 maize export quotation and 16 rice quotations. The rice quotations are combined into three groups consisting of Indica, Japonica and Aromatic rice varieties. Within each variety, a simple average of the relative prices of appropriate quotations is calculated; then the average relative prices of each of the three varieties are combined by weighting them with their assumed (fixed) trade shares. Subsequently, the IGC wheat price index, after converting it to base 2002-2004, the relative prices of maize and the average relative prices calculated for the rice group as a whole are combined by weighting each commodity with its average export trade share for 2002-2004.

5 **Vegetable Oils Price Index:** Consists of an average of 10 different 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.

AMIS five year anniversary: A short journey from stormy oceans to calm seas

When the G20 leaders set in motion the establishment of the Agricultural Market Information System (AMIS) in June 2011, food markets were struggling to cope with exceptionally uncertain supply and demand prospects, a stormy market climate marked with high and volatile prices that lasted many years before a slow return to some normality only recently. For its first and foremost task, AMIS was to guide the international community to ride over those turbulent waves. Once achieved, AMIS was expected to keep a close eye on market conditions, constantly seeking to improve market transparency and coordinate policy actions, its two main pillars.

Five years on, AMIS can pride itself on realising most of its initial goals. After no less than ten expert meetings on market information, five high-level events on policy matters, not to mention numerous international seminars and national workshops, the international community today has a strong instrument to fall back on if or when the next storm approaches. And yet, an admirable achievement of AMIS that often goes unnoticed is the rich and collaborative network of national and international experts it helped to create, who today celebrate five years of exceptional partnership.

AMIS Secretary

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

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