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Australia

Grain and Feed Update

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Report Highlights:

Australian wheat production in 2016/17 is forecast by Post to reach 26 million MT, a revision on the official estimate because of significantly more favorable seasonal conditions across virtually all cropping areas. Similarly, barley production in 2016/17 is forecast to increase to nine million MT due to considerable rainfall and improving soil moisture. For 2016/17, the sorghum harvest is forecast at 2.1 million MT, below the official forecast because of uncertain export demand. In 2016/17, the rice crop is forecast to recover to 450,000 MT on a milled basis due to improved water availability and better seasonal conditions.

Post:
Canberra

Commodities:
Wheat

Barley

Sorghum

Rice, Milled

EXECUTIVE SUMMARY:

The outlook for Australian winter crops in 2016/17 has improved significantly due to a turnaround in seasonal conditions which has seen improving rainfall in May and then record falls in June. The weather outlook for the three months to September is very positive. Soil moisture in virtually all wheat and barley cropping areas has markedly improved on the relatively dry conditions which prevailed over much of the previous year. These better seasonal conditions are also positive for Australian summer crops, with a slight decline in production forecast for sorghum while rice is expected to rebound from water-based constraints on production which were evident in 2015/16.

Production of wheat and barley in Australia in 2016/17 is forecast to reach 26 million MT and 9 million MT respectively. These forecasts represent an upward revision on the previous forecast due to favorable seasonal conditions across major cropping areas. In 2016/17, wheat production is forecast to increase by 500,000 MT on the revised official estimate, due to significant rainfall and improving soil moisture. The barley crop is forecast to increase to 9 million MT for the same reasons. For 2016/17, the sorghum harvest is expected to decline slightly to 2.1 million MT due to lower export demand and a switch to more profitable crops. In 2016/17, the rice crop is forecast to recover to 450,000 MT on a milled basis in response to improved water availability and better seasonal conditions.

The continued depressed international wheat market has led Australian growers to begin to shift to more promising crops such as chickpeas, canola, oats and pulses. The harvested area for these crops is expanding while the harvested area for more traditional winter crops such as wheat and barley has been relatively unchanged. The areas planted to canola and oats are expected to increase by around ten and twenty percent respectively in 2016/17 while chickpeas are also becoming more popular.

Australian exporters of wheat and coarse grains are facing more competitive international markets with Black Sea exporters and a number of other countries able to reach traditional markets due to the very low ocean freight rates now prevailing. Much depends on the Chinese market, where the outlook for Australian barley and especially sorghum exports does not look promising due to changes in Chinese agricultural policy. The rice industry in Australia is switching to a greater reliance on branded food products to overcome a reliance on commodity price fluctuations. It is also diversifying through an expansion in Queensland, typically as a secondary crop in sugar growing regions.

SEASONAL CONDITIONS

In early 2016, hot and dry conditions across eastern Australia prevailed across Australia and were unfavorable for crop production and soil moisture reserves. However, significant rainfall in May and especially June improved soil moisture levels in many cropping regions. Most of the winter crop was planted into good moisture and continued rainfall. Key regions such as Western Australia, the South Australian Mallee and the Wimmera and Mallee regions of Victoria all experienced favorable conditions for planting and crop development. Notably, the Bureau of Meteorology has forecast that the El Niño weather pattern is steadily declining in Australia and rainfall is expected to be above average across Australia, thereby the outlook for crops.

Higher rainfall into July 2016 has considerably increased soil moisture compared with early 2016. Soil moisture is now above average in much of eastern Australia (see charts 1 and 2 below). These conditions make it likely that the winter wheat and barley crops will be larger than the previous year. Higher yields are also expected. These conditions also provide a positive environment for the later planting window for the summer crops of sorghum and rice from September.

Chart 1: Soil moisture levels across Australian cropping regions. June 2016.

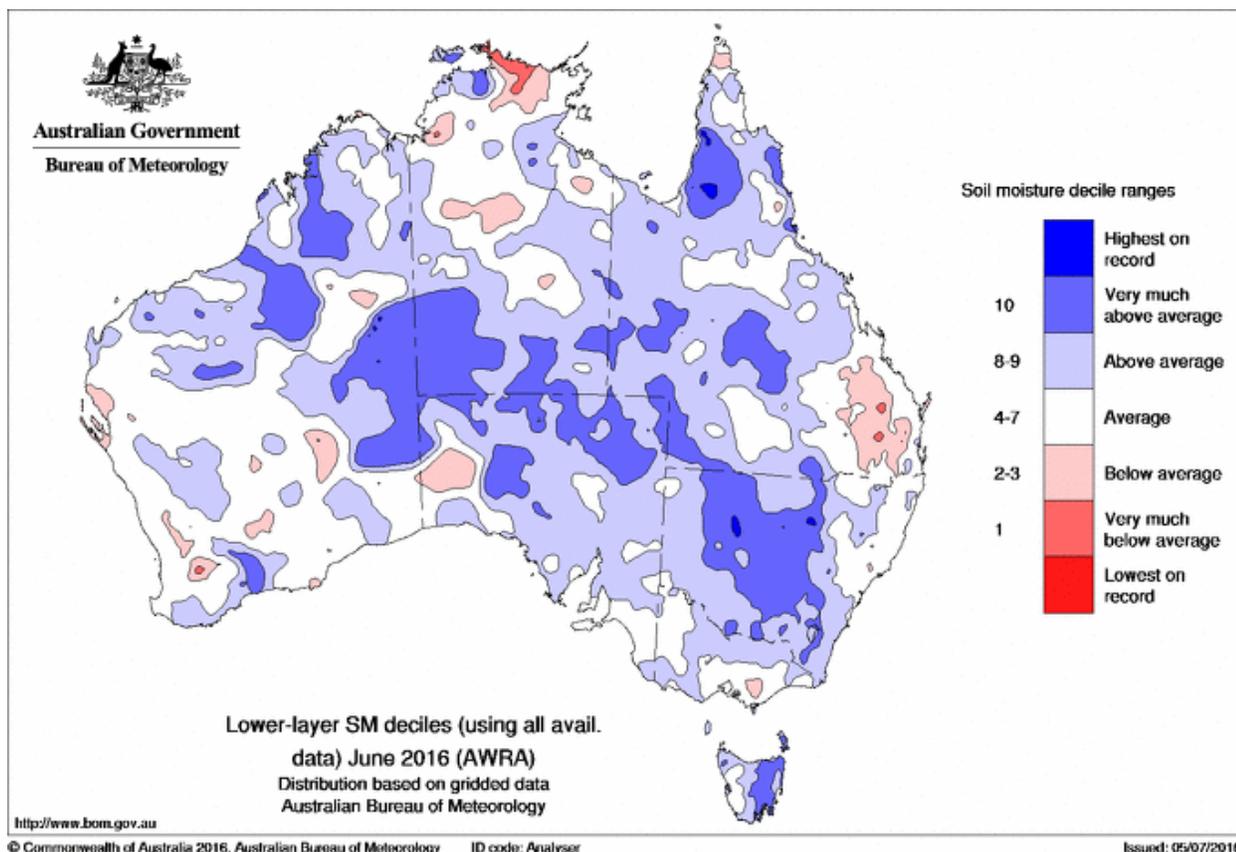
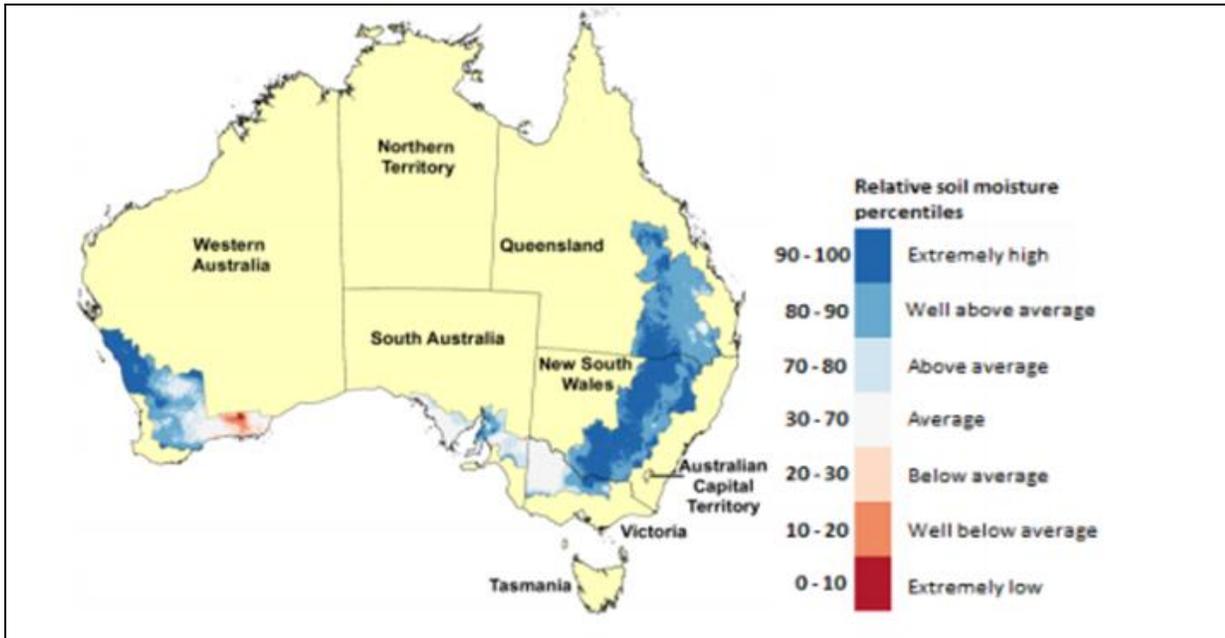


Chart 2: Relative soil moisture in the Australian cropping region, June 2016



Source: Australian Bureau of Meteorology.

The month of June 2016 was Australia's second-wettest June on record and new daily and monthly rainfall records were set across the country. The highest rainfall on record was recorded in some of the areas with very low soil moisture, such as central Queensland. The Bureau of Meteorology's seasonal rainfall outlook for July to September 2016 indicates that a wetter than average winter is highly likely for most Australian cropping regions and the eastern cropping regions have a good chance of exceeding average winter rainfall levels (see charts 3 and 4 below).

Chart 3: Likelihood of above median rainfall from July to September 2016

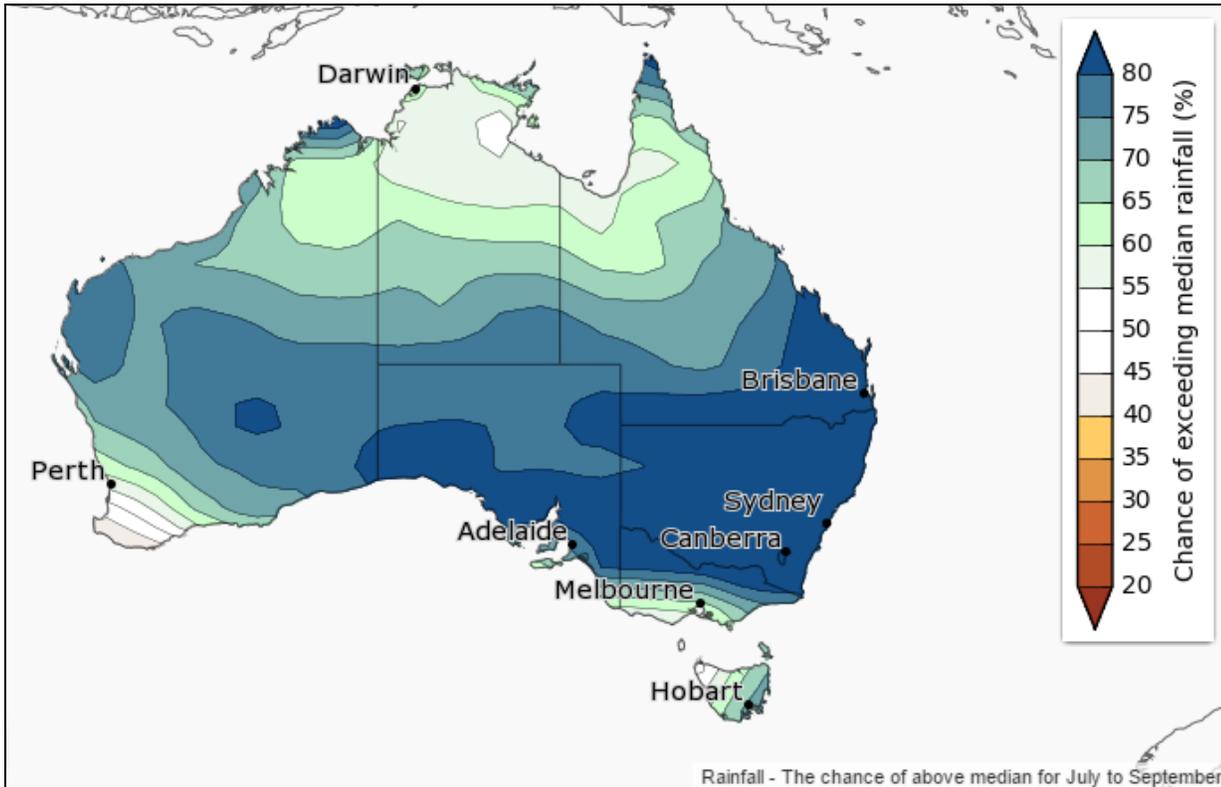
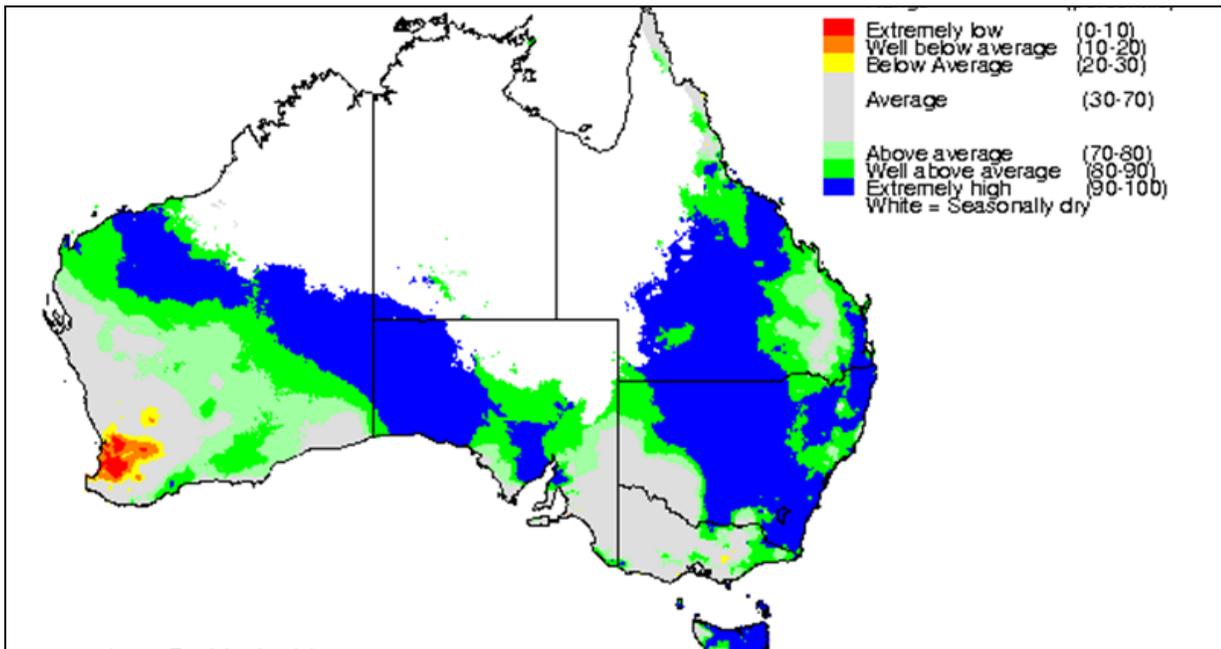


Chart 4: Intensity of rainfall in June 2016



Source: Bureau of Meteorology (July, 2016).

WHEAT

Overview

Wheat is the major winter crop in Australia, with sowing starting between April and July. Harvesting starts in central Queensland during August and progresses down the east coast to Victoria, finishing during January. On the west coast, the wheat harvest starts during October and is completed during January. The main producing states are Western Australia, NSW, South Australia, Victoria and Queensland. Western Australia accounts for over 40 percent of exports, while a greater proportion of the eastern coast wheat crop goes to domestic consumption.

Production

Australia is experiencing much improved seasonal conditions with heavy rains in June and a forecast of above median rainfall in the three months to September. These favorable conditions prevail across all States and suggest that wheat production in 2016/17 will increase on the previous year. There is good subsoil moisture across most States and these conditions would also support higher yields.

Australia's wheat harvest in 2016/17 is forecast by Post to reach 26 million MT, an upgrade of 500,000 MT from the revised official forecast, due to better seasonal conditions and expected higher yields. The area harvested in 2016/17 is expected to decline slightly to 12.8 million hectares. Some farmers have switched to other crops such as canola, oats and lupins due to higher international prices for these commodities compared to depressed prices for wheat. If the current favorable seasonal conditions continue over the year, Australian wheat production could exceed Post's forecast.

Consumption

Wheat is Australia's major grain crop and is used in the production of breads, noodles and pastas. Major types of wheat include Prime Hard, Hard, Premium White, Standard, Soft and Durum, based on protein, grain size and moisture content. Wheat consumption in Australia has been stable in recent years and Post expects this to continue. Around 70 kg of flour are consumed in Australia per capita and the domestic market is mature. There are three major millers in Australia.

Lower quality wheat is used as stock feed while around 500,000 MT waste wheat starch is used to manufacture biofuel. Demand for low quality wheat for stock feed has increased slightly in recent years, reflecting the large number of cattle in lot feeding facilities, especially in Queensland and NSW. Post has therefore forecast the feed and residual component at 4 million MT, an upward revision of 200,000 MT on the official forecast.

Trade

Exports of Australian wheat in 2016/17 are expected by Post to reach 17.5 million MT over the marketing year, matching the revised official forecast. This reflects the expected lift in overall Australian wheat production due to favorable seasonal conditions and expected higher yields. However, the international market for wheat has become increasingly competitive. Australian exporters face greater competition in some of its traditional markets such as Indonesia, where Black sea exporters doubled their market share to 16 percent share in 2015. Other regional markets such as in Malaysia and Vietnam have been comparatively resilient although the importance of the Middle Eastern and Japanese markets has declined.

Traditionally, Australia has been a significant exporter of wheat to ASEAN. However, as international freight costs are now very low Australia's traditional freight advantage into this market has been eroded and Black Sea producers are increasingly competitive in this market. The freight cost from Odessa to Indonesia is now reportedly cheaper than from some Australian ports to the same destination. Internal transport in Australia can also be significant. For some farmers, rail costs can account for over 30 percent of the cost of sending grain to port. In recent months Australian grain into S.E. Asian ports has traded at a premium to Black Sea wheat, reflecting the loss of Australia's previous freight advantage.

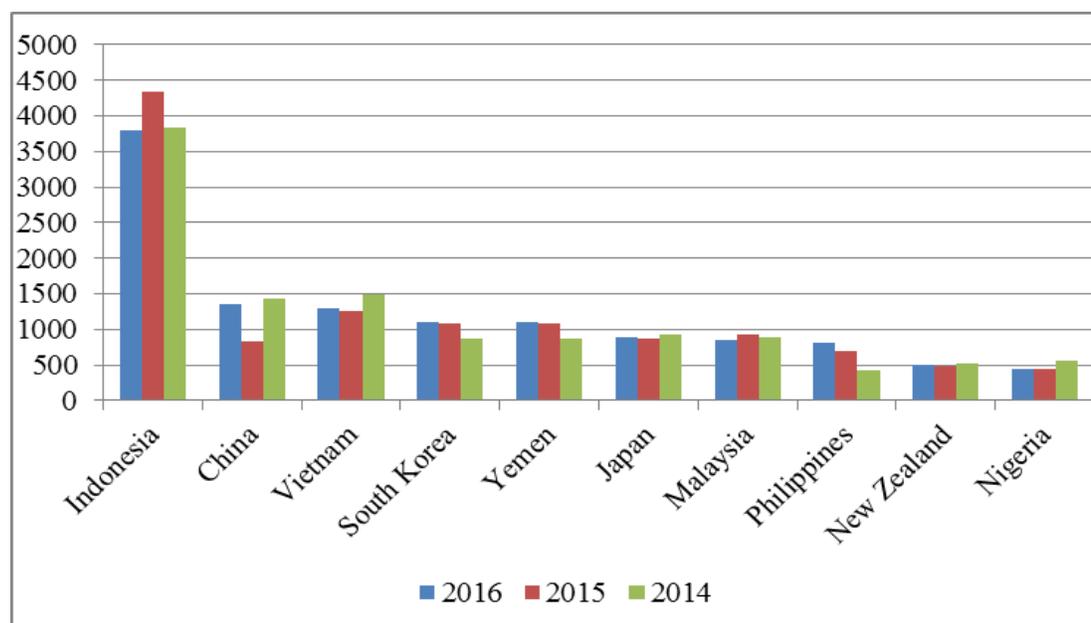
Table 1: Australian wheat exports by country, 2010-2015 ('000 MT)

	2010	2011	2012	2013	2014	2015
World	15,969	19,733	23,576	18,037	18,276	17,073
Indonesia	3,762	3,593	4,594	3,665	4,072	4,153
Iraq	247	1,022	561	1,724	810	51
Vietnam	1,310	2,403	1,994	1,347	1,377	1,306
Japan	1,074	1,263	1,369	951	933	882
South Korea	958	1,935	2,072	893	1,062	1,054
China	705	794	2,283	870	1,198	1,378
Sudan	627	568	813	849	558	208
Yemen	937	713	859	816	850	1,087
Malaysia	810	952	934	721	1,051	891
Iran	61	0	848	652	1,048	153

Note: Calendar years.

Source: Global Trade Atlas.

Chart 5: Major Australian wheat markets, year to May, 2014-16 ('000 MT)

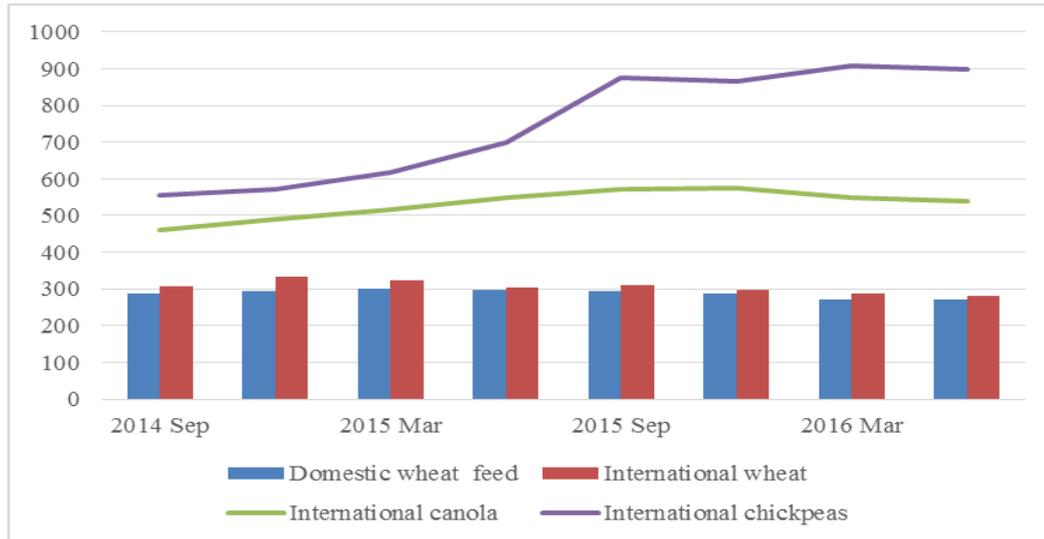


Source: Global Trade Atlas

Industry Trends

In recent years, Australia has seen greater on-farm storage as farmers seek to maintain flexibility in supply markets. In addition, new port facilities have been built over the past five years, with an additional four million MT of bulk export capacity added. A significant share of Australian wheat is exported in bulk cargoes, especially from Western Australia.

Chart 6: Grain price estimates, 2014-16 (A\$/MT)



Source: ABARES and market sources.

Production, Supply and Distribution Statistics

Wheat	2014/2015		2015/2016		2016/2017	
Market Begin Year	Oct 2014		Oct 2015		Oct 2016	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	12384	12384	12800	12800	12800	12800
Beginning Stocks	4558	4558	4837	4837	5862	5262
Production	23910	23910	24500	24500	25500	26000
MY Imports	159	159	150	150	150	150
TY Imports	162	162	160	160	150	150
TY Imp. from U.S.	3	3	0	0	0	0
Total Supply	28627	28627	29487	29487	31512	31412
MY Exports	16590	16590	16400	17000	17500	17500
TY Exports	16575	16575	16200	16500	17500	17500
Feed and Residual	3800	3800	3800	3800	4000	4000
FSI Consumption	3400	3400	3425	3425	3460	3460
Total Consumption	7200	7200	7225	7225	7460	7460

Ending Stocks	4837	4837	5862	5262	6552	6452
Total Distribution	28627	28627	29487	29487	31512	31412
(1000 HA) ,(1000 MT)						

BARLEY

Overview

Barley is usually sown during May and harvested from November. The crop grows through the winter months in Australia, typically in rotation with wheat, canola, oats and pulses. Western Australia is the major barley producing State with over one third of the harvested area and output. The States of NSW, South Australia and Victoria each account for around one fifth of barley production. Around one third of barley is used in Australia for food and beer production, animal feed and seed. The remainder is exported with around half used as feed barley, one third as malting barley and the rest as malt, primarily for the manufacture of beer or spirits.

Production

Australia is experiencing much improved seasonal conditions with heavy rains in June and a forecast of above median rainfall in the three months to September. These favorable conditions prevail across all States and suggest that barley production in 2016/17 will increase on the previous year. There is good subsoil moisture across most States and these conditions would also support higher yields. Planting of barley has been sustained by higher soil moisture and favorable prices for malting barley.

Australia's barley harvest in 2016/17 is forecast by Post to reach nine million MT, the same as the official forecast, due to expected better seasonal conditions and higher yields. The area harvested in 2016/17 is forecast to be stable at around four million hectares, although some farmers have switched to other crops. There is a possibility that barley production will exceed Post's forecast if the unusually favorable seasonal conditions continue over the year.

Consumption

Barley is exported to malting, brewing, distilling, Shochu and feed industries in a range of countries. In Australia, barley is mainly used as a feed grain, but also as malting barley for the production of beer and other alcoholic beverages. Around 30 to 40 percent of barley grown in Australia achieves malting grade with the remainder consumed as food and feed barley. Overall, Australia produces almost one million MT of malt from barley annually, with around 200,000 MT consumed domestically and 700,000 MT exported. Australian demand for feed barley is around two million MT.

Trade

Australia normally supplies around 30 percent of global trade in malt barley and 20 percent of trade in feed barley. The major international markets for malting barley include China, Japan and Vietnam. The markets for feed barley include Japan, Middle East region and China. Malting grade barley is exported to the Japanese market for Shochu, the Chinese market for Baidu. It is also exported to the beer markets in China, Japan and India.

Exports of Australian barley in 2016/17 are expected by Post to reach six million MT over the marketing year, the same as the official forecast. However, the international market for barley has become increasingly difficult due to the very international freight costs currently prevailing. Australian exporters face greater competition in traditional markets in the Middle East such as Saudi Arabia, Kuwait and the UAE where Black sea exporters such as the Ukraine have increased market share.

Demand for Australian barley in China is more uncertain. The Chinese market for feed barley could be significantly affected by new import restrictions, although Chinese demand for malting barley is not expected to decline. China is the world's biggest beer market at around 50 billion liters annually while Vietnam is an emerging market for Australian exports of malting barley.

Table 3: Australian barley exports by country, 2010-15 ('000 metric tons)

	2010	2011	2012	2013	2014	2015
World	3,950	5,058	5,111	5,121	6,123	5,187
China	1,392	1,268	2,102	1,766	3,170	2,905
Saudi Arabia	761	1,667	1,153	1,702	471	0
Japan	1,067	962	769	967	311	80
Kuwait	199	336	185	175	67	84
UAE	305	160	350	130	105	42

Note: Calendar years.

Source: Global Trade Atlas.

Production, Supply and Distribution Statistics

Barley	2014/2015		2015/2016		2016/2017	
Market Begin Year	Nov 2014		Nov 2015		Nov 2016	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	4078	4078	4105	4000	4100	4000
Beginning Stocks	693	693	1020	1120	1113	1220
Production	8646	8646	8593	8600	9000	9000
MY Imports	0	0	0	0	0	0
TY Imports	0	0	0	0	0	0
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	9339	9339	9613	9720	10113	10220
MY Exports	5219	5219	5500	5500	6000	6000
TY Exports	5266	5266	5200	5200	6000	6000
Feed and Residual	1800	1700	1700	1700	1600	1700
FSI Consumption	1300	1300	1300	1300	1300	1300
Total Consumption	3100	3000	3000	3000	2900	3000
Ending Stocks	1020	1120	1113	1220	1213	1220
Total Distribution	9339	9339	9613	9720	10113	10220

(1000 HA) ,(1000 MT)

SORGHUM

Overview

Australia normally produces around two to three percent of global sorghum output and accounts for five percent of global exports. Sorghum is a summer crop mainly used for livestock feed. Around seventy percent of the Australian crop is grown in Queensland and the remainder in northern NSW. Planting times are from September to January and sorghum is classified as either grain sorghum or forage sorghum according to the tannin content. Grain sorghum is often used for feed grain for the beef, dairy, pig and poultry industries and is the main summer grain crop in most regions of Queensland. In recent years, a significant share of the crop has been exported to China for use as animal feed.

Grain sorghum production, yield and the harvested area have differed significantly in Australia over the last decade because of the highly variable rainfall pattern and price outlook. The use of no-till and minimum-till fallow farming in Queensland has widened the planting window for sorghum by allowing the crop to be sown up to 6-7 weeks later than normal after good rain. This practice increases the prospects for the crop and the yield potential. The use of no-till fallows has generally increased soil moisture in fields and the prospects for new crops.

Production

Australian sorghum production in 2016/17 is forecast by Post at 2.1 million MT, which is 100,000 MT below the official forecast. This downgrade to expected production is due partly to the deteriorating outlook for sorghum exports to China, which has accounted for almost all of Australian exports in recent years. In addition, the higher returns available to farmers from alternative crops are expected to contribute to the decline in the size of the 2016/17 sorghum crop in Australia.

Exports

In 2016/17, sorghum exports are forecast by Post to fall to 800,000 MT which is 200,000 MT below the official forecast of one million MT. This revision has been made because of the significant uncertainty over the prospects for exports to China, which has been the dominant export market. Chinese demand for Australian sorghum in recent months has been relatively weak and imports from the United States have been preferred except for a period from June to August 2015 (see charts 7 and 8 below).

Table 5: Australian sorghum exports by country, 2010-2015 ('000 metric tons)

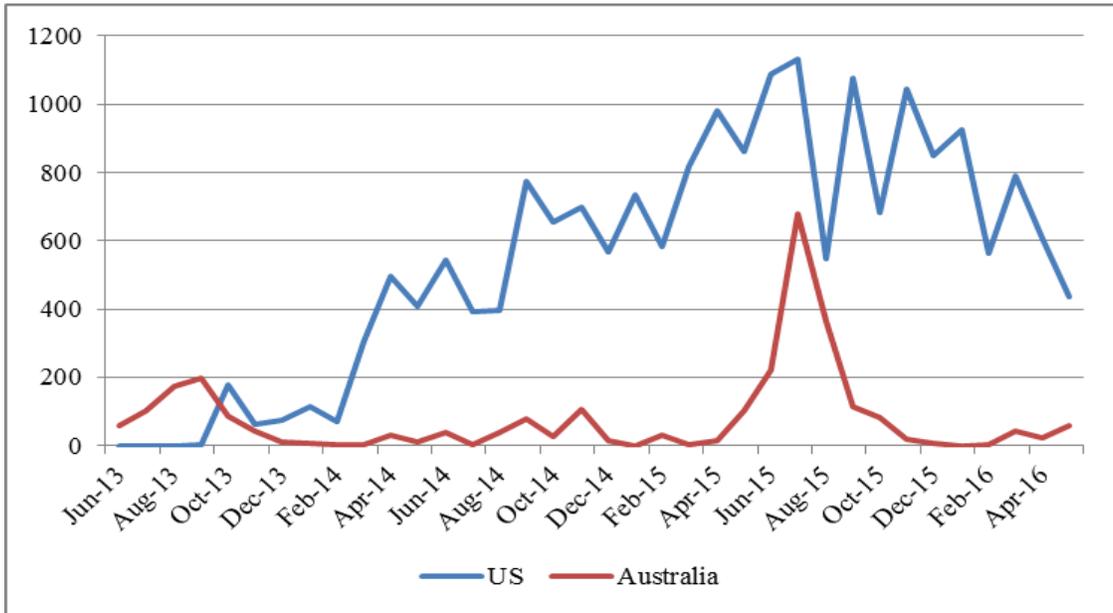
	2010	2011	2012	2013	2014	2015
World	51	116	205	797	356	1,524
China	25	0	39	758	349	1,512
Taiwan	10	19	34	13	3	4
Japan	1	39	1	13
Philippines	4	3	5	7	2	6
New Zealand	0	16	27	2	0	0

Note: Calendar years.

Source: Global Trade Atlas.

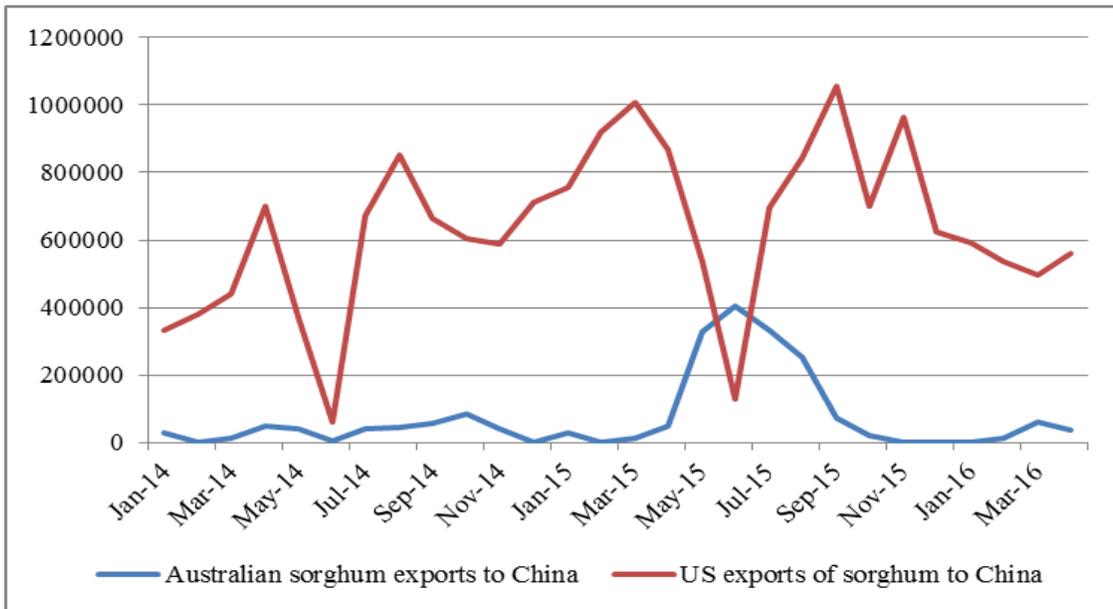
More recently, the competitiveness of Australian sorghum appears to have declined against US sorghum, with a reported US\$15 discount to Australian sorghum in May 2016. On the other hand, the China-Australia Free Trade Agreement (ChAFTA) removed a two percent tariff on sorghum, which could have some influence on Chinese demand for imported sorghum.

Chart 7: Chinese imports of sorghum from Australia and the United States, 2013-16



Source: World Trade Atlas.

Chart 8: Australian and US sorghum exports to China, 2014-16 (MT)



Source: World Trade Atlas

If Chinese demand for declines significantly, it not clear which countries would be major alternative buyers as Mexico and Japan have been reducing imports in recent months. However, Chinese demand for sorghum to make alcoholic beverages is expected to provide some support for Australian exports overall. Demand for sorghum into the New Zealand market for use as dairy feed has been affected by comparatively low international dairy prices. In addition, the international price of corn, an alternative animal feed, has recently been at a discount to sorghum prices.

Consumption

Sorghum prices in Australia are usually at a substantial discount to barley and wheat. It is likely that domestic demand for sorghum as a feed grain will rise if export demand falters. Post has therefore revised the feed and residual component upwards by 100,000 MT and expects increased supplies of sorghum to be used as livestock feed in 2016/17. In support of this forecast is the record number of one million livestock in feedlots in Australia. In addition, there are many feedlots in southern Queensland where the crop can be transported at a comparatively low cost.

Production, Supply and Distribution Statistics

Sorghum	2014/2015		2015/2016		2016/2017	
Market Begin Year	Mar 2015		Mar 2016		Mar 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	732	732	681	700	700	700
Beginning Stocks	172	172	246	246	178	241
Production	2209	2209	2037	2100	2200	2100
MY Imports	0	0	0	0	0	0
TY Imports	0	0	0	0	0	0
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	2381	2381	2283	2346	2378	2341
MY Exports	1630	1630	1000	1000	1000	800
TY Exports	1700	1700	1000	1000	1000	800
Feed and Residual	500	500	1100	1100	1100	1200
FSI Consumption	5	5	5	5	5	5
Total Consumption	505	505	1105	1105	1105	1205
Ending Stocks	246	246	178	241	273	336
Total Distribution	2381	2381	2283	2346	2378	2341
(1000 HA) ,(1000 MT)						

RICE

Production

The Australian rice industry has experienced significant variations in production because of water constraints and changing seasonal conditions. While it has the capacity to produce over one million MT of rice, this level of production has not been approached in recent years due to higher water prices and unreliable rainfall. For the 2015/16 season, general security water allocations in the Murray Valley were only one fifth of entitlements at the time of the September planting window. This discouraged many farmers from planting rice, with some selling part of their water entitlements.

In 2016/17, Post forecasts an upturn in conditions compared to the previous year, with a harvest area of 60,000 hectares because of greater water availability. The month of June 2016 delivered above average to the highest on record rainfall across most of the Queensland and New South Wales area of the Murray-Darling Basin. The trend of above average rainfall is forecast by the Australian Bureau of Meteorology to continue until at least September 2016.

Australian rice production for 2016/17 is forecast by Post to reach 450,000 MT on a milled basis, which is an upgrade on the official forecast of 400,000 MT for a number of reasons. These include a significant carryover of untraded water entitlements from the previous season and a high guaranteed price for rice of A\$415/MT by the industry body SunRice. This forecast is relatively conservative as better water availability and seasonal conditions could result in higher yields. Water allocations for 2016/17 are expected to be well above the previous season due to improved rainfall and a pause in the federal government's environmental water entitlement purchases.

Industry Structure

There are over 1,000 rice farms growing irrigated rice in the Murrumbidgee Valley of NSW and the Murray Valley of NSW and Victoria. There is only one rice crop harvested per season, with planting from September, harvest from March. Virtually all of the rice produced in Australia is comprised of medium and short grain Japonica varieties, while long grain varieties such as Basmati and Jasmine are imported. The average size of a rice farm is 400-500 hectares and rice production uses similar agricultural techniques and equipment as winter crops such as wheat and barley, such as aerial sowing and standard crop harvesters.

The typical yield on irrigated rice production in Australia is one of the highest in the world at over ten MT per hectare. However, uncertainty over water costs in NSW has encouraged the rice industry to expand into the more water abundant regions in Queensland and northern Australia. Some Queensland sugar growers are beginning to incorporate rice into their sugarcane rotation and over 3,000 hectares will eventually be harvested. This rice growing area extends through the whole of tropical North Queensland from Tully down to Mackay, with the main growing regions being the Burdekin, Mackay and Tully. Rice would be a complementary crop to sugar, as it has a different growing season.

Trade

Exports for 2016/17 are forecast by Post at 300,000 MT, which are 100,000 MT higher than the official forecast due to higher expected production and stocks. Imports of 160,000 MT are expected, in line with the official forecast. Country details of exports are unavailable because of confidentiality provisions.

There is some uncertainty about the trade pattern as some rice imports may be re-exported. Due to water shortages and declining crop production in NSW, SunRice has been contracting farmers in Asia to grow the rice it needs to fill its global contracts. A recent annual report of the sole processor SunRice indicated that 300,000 MT of rice was sourced by the company from Asia and the United States to ensure that the company could service and maintain its expanding branded markets. Long grain rice for the Australian market was sourced from Thailand, where SunRice has long standing trading and food processing arrangements, while medium grain rice was sourced from the United States and Thailand. However confidentiality provisions on trade statistics make it difficult to verify these trends.

Consumption

Rice consumption in Australia in 2016/17 is forecast by Post to be 350,000 MT, the same as the official estimate. The majority of rice grown in Australia is sold to the Ricegrowers cooperative and is marketed under the SunRice brand. Around ninety percent of SunRice's rice products are now sold locally and overseas as branded products, rather than in bulk commodity sales which were the major form of sales until a few years ago. This has provided the industry with some protection from seasonal uncertainty and exchange rate fluctuations.

Production, Supply and Distribution Statistics

Rice, Milled	2014/2015		2015/2016		2016/2017	
Market Begin Year	Mar 2015		Mar 2016		Mar 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	70	71	23	30	50	60
Beginning Stocks	241	241	223	223	53	103
Milled Production	497	497	180	250	400	450
Rough Production	690	690	250	347	556	625
Milling Rate (.9999)	7200	7200	7200	7200	7200	7200
MY Imports	155	155	180	180	160	160
TY Imports	151	151	180	180	160	160
TY Imp. from U.S.	11	11	0	0	0	10
Total Supply	893	893	583	653	613	713
MY Exports	308	308	180	200	200	300
TY Exports	323	323	180	200	200	350
Consumption and Residual	362	362	350	350	350	350
Ending Stocks	223	223	53	103	63	63
Total Distribution	893	893	583	653	613	713

(1000 HA) ,(1000 MT)