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Australia

Grain and Feed Update

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Report Highlights:
Post forecast Australian wheat production at 21.5 million metric tons (MMT) for 2017/18 reflecting the late and significant improvement in seasonal weather conditions across parts of the State of Western Australia and eastern parts of the country. Barley production is forecast by Post at 8.5 MMT as a result of timely rainfall and milder than expected conditions. Post also expects sorghum production to rebound to 2 MMT due to an increased harvested area and better weather conditions in southern Queensland. Rice production is also expected to slightly increase to 0.8 MMT in 2017/18 as sufficient water is expected to be available.

Post:	**Commodities:**
Canberra	Wheat
	Barley
	Sorghum
	Rice, Milled

EXECUTIVE SUMMARY

The 2017/18 Australian wheat and barley winter crops were affected by significant weather variations across different regions. Below average rainfall and high temperatures prevailed in eastern Australia, especially in New South Wales (NSW), for most of the year. However, timely late season rainfall and milder temperatures enabled winter crop production and yields in the states of South Australia, Victoria, and Western Australia to be higher than expected. Yields are expected to differ significantly across regions. Due to a better than expected finish to the growing season, Post has slightly increased the barley forecast for 2017/18.

Post forecasts wheat production at 21.5 million metric tons (MMT) for 2017/18, the same as the revised official forecast. Domestic consumption is expected to be stable with stocks revised down to 3.2 MMT, in line with the revised official forecast. Post notes that in January 2018, the Australian Bureau of Statistics (ABS) revised wheat production to 30.4 MMT from 33.5 MMT and also modified the harvested area for wheat to 11.7 million hectares from 12.4 million hectares. ABS notes that the data could be further revised.
Barley production for 2017/18 is expected to be 8.5 MMT, compared to the official forecast of 8 MMT, as a result of favorable weather in Victoria and Western Australia. By contrast, poor rainfall and high temperatures in NSW resulted in a lower barley harvest in that state. Post notes that ABS provisionally revised its barley production data for the 2016/17 season to 12.9 MMT from 13.4 MMT.

Sorghum production in 2017/18 is likely to recover to 2 MMT as a result of an expanded harvested area, timely rains in southern Queensland, and higher prices for alternative feed grains. This forecast is slightly higher than the official estimate of 1.9 MMT. Rice production is also likely to increase to 0.8 MMT in 2017/18, the same as the official forecast, as sufficient water is expected despite continuing issues regarding water entitlements.

SEASONAL CONDITIONS

In the second half of 2017, many cropping regions in eastern Australia received below average rainfall and above average temperatures, which affected the growing season. In NSW, rainfall in December was too late for crop development and created numerous harvest challenges. However, in Victoria, significant rainfall fell in November and December, which boosted production and yields. Western Australia, received beneficial rain in late 2017 and temperatures were milder than expected. Overall, yields in 2017/18 are expected to fall significantly in eastern Australia, but increase in Western Australia compared to last year. The Bureau of Meteorology (BOM)'s 3-month rainfall outlook (January to March 2018) is neutral for rainfall (Chart 1) and temperatures (Chart 2) across most cropping regions.

Chart 1: Chance of exceeding the median rainfall, January to March 2018

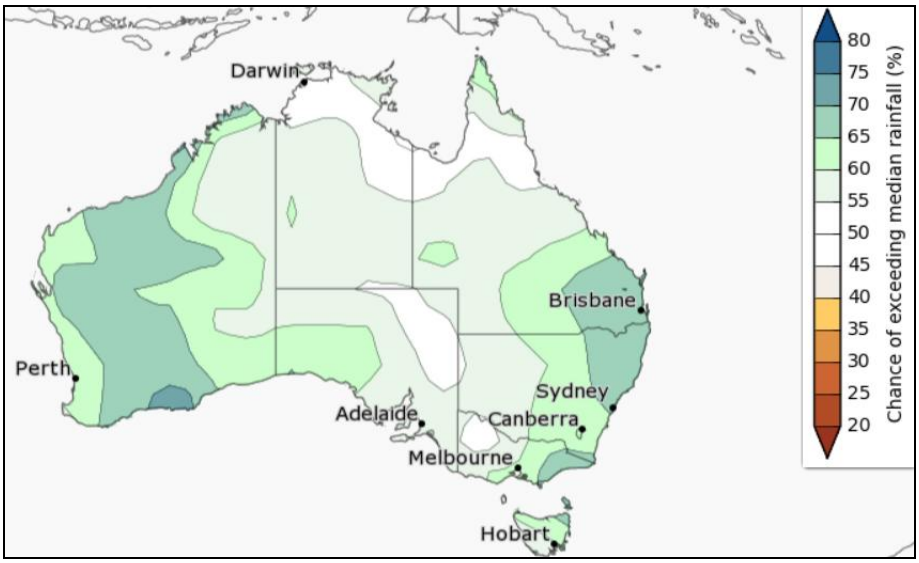
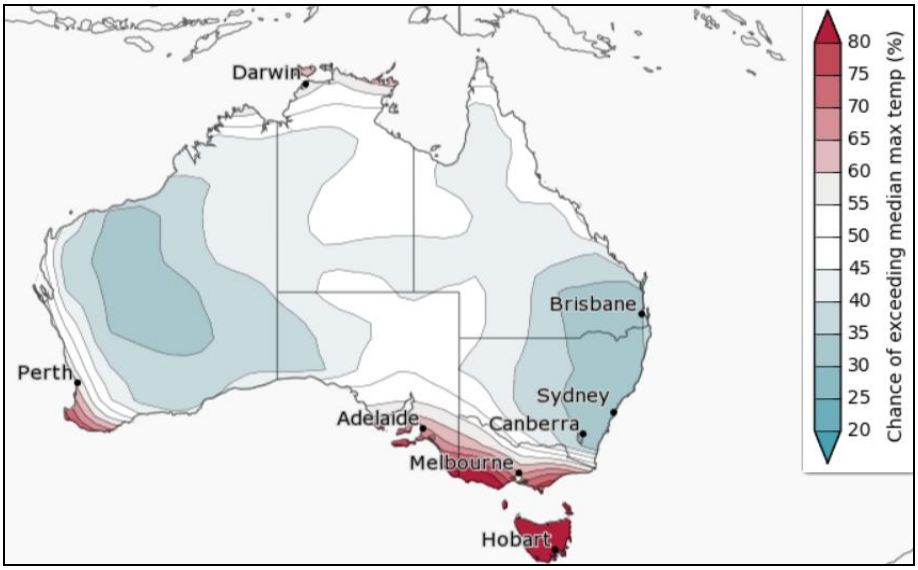


Chart 2: Chance of exceeding the median temperature, January to March 2018



Source: Australian Bureau of Meteorology (2018).

WHEAT

Production

Australian wheat production is forecast at 21.5 MMT for 2017/18, the same as the official forecast, due to better than expected end of the season rainfall and milder temperatures across major wheat growing areas. Although adverse weather conditions prevailed across NSW for most of the year causing lower production and yields, improved conditions in Western and South Australia, and Victoria offset the weaker production in the east. Accordingly, yields in the Mallee region of Victoria and the Esperance region of Western Australia, are expected to be significantly above estimates made earlier in the year.

In January 2018, the ABS released revised wheat production data for the 2016/17 season to 30.4 MMT (see: link). There was also a preliminary revision of the harvested area for 2016/17 to 11.7 million hectares; below the official estimate of 12.4 million hectares. Post included the ABS revisions for 2016/17 in this update, but notes that they are still preliminary and could be revised upwards.

Wheat is the major winter crop in Australia, with sowing starting between April and July. The main producing states are Western Australia, NSW, South Australia, Victoria, and Queensland. Harvesting starts in central Queensland during August and progresses down the east coast to Victoria, finishing in January. On the west coast, the wheat harvest starts in October and is completed during January. Western Australia usually accounts for over 40 percent of exports, while a greater proportion of the east coast wheat harvest is consumed domestically. Australian wheat farmers are increasingly using new technology, such as autonomous tractors, robotic weed killers, drone monitoring, and other satellite sensing systems.

Consumption

Wheat domestic consumption is estimated at 6.8 MMT for 2017/18, the same as the official forecast. Higher quality wheat is used mainly in the production of breads, noodles and pastas while lower grades are used as animal feed. Major types of wheat include Prime Hard, Hard, Premium White, Standard, Soft, and Durum. The quality of wheat is based on protein, size, and moisture content. Wheat consumption in Australia has declined slightly in recent years due to changes in diets such as a consumer shift to gluten free products. Australians consume around 70 kilograms of flour per capita annually and the domestic market is comparatively mature.

Australia has a number of regional markets for feed grain, which are usually separated by the comparatively high cost of road and rail transport between Western Australia and various regions of the country. Post notes that grain for domestic feed stock markets is generally transported by truck while most domestic milling wheat is transported via rail to manufacturers such as Manildra Mills, Weston Mills, and Allied Mills. The movement of grain to the ports is generally through a combination of trucks and rail, depending on cost, proximity, and available transport.

Trade

Australian wheat exports are forecast at 16 MMT for 2017/2018, the same as the official forecast, although stock levels are revised down due to reflect the Australian government's amended 2016/17 production data. Australian exporters are expected to face continued competition in major markets from Black Sea wheat exporters, especially feed wheat. Australian premium hard wheat exporters also compete in Southeast Asia against traders from the United States and Canada. Indonesia traditionally accounts for around 20 percent of total wheat exports, but Australian exporters have been facing greater import competition in the feed market as well as the baking industry. This competition is expected to grow in 2017/18.

Table 1: Australian exports of wheat by country, volume and average value, 2011-2017 ('000 MT)

Country	2011	2012	2013	2014	2015	2016	2017 (a)
Indonesia							
('000 MT)	3,593	4,594	3,665	4,072	4,153	3,469	3,913
(US$/MT)	325	299	317	280	250	210	196
China							
('000 MT)	794	2,283	870	1,198	1,378	1,499	1,295
(US$/MT)	279	259	314	296	258	219	192
Vietnam							
('000 MT)	2,403	1,994	1,347	1,377	1,306	1,507	1,350
(US$/MT)	298	284	326	292	254	220	209
Yemen							
(US$/MT)	713	859	816	850	1,057	782	772
(US$/MT)	300	286	318	284	251	215	203
South Korea							
('000 MT)	1,935	2,072	893	1,062	1,054	1,056	656
(US$/MT)	305	276	246	296	256	245	201
Malaysia							
('000 MT)	952	934	721	1,051	891	873	693
(US$/MT)	330	298	322	291	245	213	203
Japan							
('000 MT)	1,263	1,369	951	933	882	839	636
(US$/MT)	379	295	367	308	271	252	223
Philippines							
('000 MT)	1,281	1,675	355	550	673	1,026	1,702
(US$/MT)	259	267	330	286	254	214	187
India							
('000 MT)	1	4	13	22	438	919	1,765
(US$/MT)	..	..	..	..	242	220	205
Other	6,798	7,792	8,406	7,161	5,241	4,167	
World							
('000 MT)	19,733	23,576	18,037	18,276	17,073	16,137	16,234
(US$/MT)	320	288	331	294	259	224	204

Note: Calendar years, (a) First eleven months.
Source: Global Trade Atlas

Table 2: Production, Supply and Demand Estimates: Wheat ('000 HA and '000 MT)

Wheat	2015/2016		2016/2017		2017/2018	
Wheat	2015/2016		2016/2017		2017/2018	
Market Begin Year	Oct 2015		Oct 2016		Oct 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	11,282	11,282	11,720	11,720	12,500	12,500
Beginning Stocks	4,669	4,669	3,854	3,854	4,367	4,367
Production	22,275	22,275	30,363	30,363	21,500	21,500
MY Imports	154	154	144	144	150	150
TY Imports	154	154	154	154	150	150
TY Imp. from U.S.	2	2	2	2	0	0
Total Supply	27,098	27,098	34,361	34,361	26,017	26,017
MY Exports	16,119	16,119	22,644	22,644	16,000	16,000
TY Exports	15,780	15,780	22,061	22,061	17,500	17,500
Feed and Residual	3,700	3,700	3,900	3,900	3,400	3,400
FSI Consumption	3,425	3,425	3,450	3,450	3,400	3,400
Total Consumption	7,125	7,125	7,350	7,350	6,800	6,800
Ending Stocks	3,854	3,854	4,367	4,367	3,217	3,217
Total Distribution	27,098	27,098	34,361	34,361	26,017	26,017
Yield	1.9744	1.9744	2.5907	2.5907	1.72	1.72
(1,000 HA), (1,000 MT), (MT/HA)						

Note: 'New Post' data reflects FAS/Canberra's assessment and is not official data.

BARLEY

Production

Barley production is forecast at 8.5 MMT, 6 percent above official estimates due to favorable weather conditions in late 2017 and improved yields in some regions. Timely and sufficient rainfall benefitted the main barley cropping areas of southeastern and Western Australia in late 2017 while low rainfall and dry conditions in NSW affected the overall quality and quantity of the barley crop.

In January 2018, the ABS revised its barley production for the 2016/17 season to12.9 MMT (see: link). The preliminary ABS revisions have been incorporated in this update, but the data could be revised upwards in the next few months.

Barley is usually sown in May and harvested during November. The crop grows through Australia's winter months, 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. NSW, South Australia, and Victoria each account for around one fifth of barley production. One third of barley is generally used in Australia for food and beer production, animal feed, and seed. The remainder is exported with around 50 percent used as feed barley, one third as malting barley, and the rest for the manufacture of beer or spirits.

Consumption

Post forecasts domestic consumption of barley at 2.8 MMT in 2017/18, the same as official estimates. The barley industry produces grain for distilled spirits and normal and craft beer production. Barley is also used as feed grain for domestic and overseas livestock industries.

Demand for malt barley is increasing and is used primarily to produce alcohol (beer and distilled spirits such as Shochu, a Japanese distilled spirit) and food including confectionary, snack foods, breakfast cereals, miso, and tea. Generally, Australia produces more than 2 MMT of malting barley. Around 900,000 metric tons (MT) of malt can be produced from 1 MMT of barley. Annual malt exports are around 700,000 MT, mainly to Asia. Malt consumption by Australia's domestic brewing industry is around 170,000 MT. Craft beer brewers consume an estimated 5 percent of the country's malting barley.

Trade

Barley exports are forecast at 6 MMT in 2017/18, slightly above official estimates, due to higher than expected production and yields. China is the prime destination for Australian barley exports, ahead of markets such as Saudi Arabia and Japan. Japanese demand for feed and quality grade barley declined significantly in 2017 while orders from Saudi Arabia rose. Australia's position in the Middle East feed barley market depends on relative prices compared to exporters from the Black Sea region.

Australia normally accounts for around one fifth of the global feed barley trade. The Australian barley industry has sought to strengthen links with buyers in Asia through investment in malting plants in a number of countries. In mid-2017, the Western Australian grain growers cooperative CBH Group opened a US$70 million 110,000 MT malt plant in Vietnam to provide barley growers in Western Australia with a stronger link to the Vietnamese beer market; the fastest growing in the region.

Table 3: Australian exports of barley, 2011-2017 by country, volume and average value ('000 MT)

Country	2011	2012	2013	2014	2015	2016	2017 (a)
China	1,268	2,102	1,766	4,377	3,586	3,516	3,622
(US$/MT)	301	273	297	259	255	193	178
Saudi Arabia	1,667	1,153	1,702	471	525	304	739
(US$/MT)	272	259	275	253	182	181	161
Japan	962	769	967	605	217	1,058	381
(US$/MT)	292	265	293	262	273	194	176
UAE	160	350	130	164	118	367	99
(US$/MT)	287	259	292	251	247	180	172
Kuwait	336	185	175	111	44	393	165
(US$/MT)	272	265	279	244	186	176	160
Other	665	552	381	395	252	219	3,395 (b)
World	5,058	5,111	5,121	6,123	5,188	5,857	8,401
	282	267	289	259	255	193	180

Note: Calendar year (a) First eleven months of 2017; (b) includes 3.2 MMT for an unidentified country.
Source: Global Trade Atlas

Table 4: Production, Supply and Demand Estimates: Barley ('000 HA and '000 MT)

Barley	2015/2016		2016/2017		2017/2018	
Market Begin Year	Nov 2015		Nov 2016		Nov 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	4,108	4,108	4,624	4,035	3,900	4,600
Beginning Stocks	1,120	1,120	1,069	1,069	1,298	1,298
Production	8,993	8,993	12,921	12,921	8,000	8,500
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	10,113	10,113	13,990	13,990	9,298	9,798
MY Exports	5,744	5,744	9,192	9,192	5,800	6,000
TY Exports	5,401	5,401	9,193	9,193	5,800	6,000
Feed and Residual	2,000	2,000	2,200	2,200	1,500	1,500
FSI Consumption	1,300	1,300	1,300	1,300	1,300	1,300
Total Consumption	3,300	3,300	3,500	3,500	2,800	2,800
Ending Stocks	1,069	1,069	1,298	1,298	698	998
Total Distribution	10,113	10,113	13,990	13,990	9,298	9,798
Yield	2.1891	2.1891	2.7943	3.2022	2.0513	1.8478
(1,000 HA), (1,000 MT), (MT/HA)						

Note: 'New Post' data reflects FAS/Canberra's assessment and is not official data.

SORGHUM

Production

Sorghum production is expected to rebound to 2 MMT, 5 percent above the official forecast as favorable weather conditions are expected compared to the previous year. In addition, the crop area is expected to expand by 5 percent to 700,000 hectares; 11 percent above the official forecast.

Low sorghum prices in 2016/2017 discouraged sowing, especially in northern NSW. In addition, the late finish of the 2016/17 winter crop reduced the duration of the planting window for sorghum, which led many farmers to choose to plant alternative crops. Growing conditions for the 2017/2018 season appear to be more favorable with better soil moisture and moderate temperatures in southern Queensland.

The ABS recently revised its 2016/17 sorghum production data to 990,000 MT (see: link). Post has incorporated this preliminary revision, but notes that it could be further revised in coming months.

The biofuels industry is driving domestic demand for sorghum. The Dalby ethanol plant in Queensland is currently expanding operations to meet a new state government ethanol mandate. When the Dalby operation is running at full capacity, around 200,000 MT of sorghum is expected to be used for ethanol production annually and this amount could increase in the future. The biofuel plant also produces dried distillers' grains (DDG), which is sold mainly as a high-protein feed stock for swine, dairy cows, and grain fed beef cattle.

Australia normally produces around two to three percent of global sorghum production 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. Sorghum is typically grown as a rotation crop as it is relatively drought tolerant and withstands acidic soils. Planting times for sorghum extend from September to January.

Consumption

Australian domestic sorghum consumption in 2017/18 is forecast at 1 MMT, in line with official estimates. Sorghum has traditionally been used domestically for feed grain in the beef, dairy, swine, and poultry industries. Sorghum is classified as either grain sorghum or forage sorghum according to the tannin content.

Trade

Post forecasts sorghum exports at 0.9 MMT, 12.5 percent above the official forecast because of favorable weather conditions and an expected expansion in planting area. Export demand for sorghum has varied significantly in recent years. During the past year, Australian sorghum has been less competitive in the Chinese feed market as a result of higher prices compared to U.S. exports. Nonetheless, Chinese demand for Australian sorghum to produce bajiu spirits is expected to be resilient.

Table 5: Australian exports of sorghum by country, volume and average value, 2011-2017 ('000 MT)

Country	2011	2012	2013	2014	2015	2016	2017 (a)
China	0	39	758	349	1,512	752	256
(US$/MT)	..	248	327	302	272	203	215
Japan	39	1	13	0	0	0	1
(US$/MT)	292	356	326	..	..	..	
Taiwan	19	34	13	3	4	19	6
(US$/MT)	319	244	300	327	284	184	252
Other	23	41	13	4	8	23	27
World	116	205	797	356	1,524	794	290
(US$/MT)	300	257	327	303	273	203	249

Note: Calendar year (a) First eleven months of 2017.
Source: Global Trade Atlas

Table 6: Production, Supply and Demand Estimates: Sorghum ('000 HA and '000 MT)

Sorghum	2015/2016		2016/2017		2017/2018	
Market Begin Year	Mar 2016		Mar 2017		Mar 2018	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	521	521	371	371	630	700
Beginning Stocks	252	252	234	234	100	100
Production	1,791	1,791	991	991	1,900	2,000
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	2,043	2,043	1,225	1,225	2,000	2,100
MY Exports	904	904	450	450	800	900
TY Exports	717	717	542	542	600	700
Feed and Residual	900	900	475	475	800	800
FSI Consumption	5	5	200	200	200	200
Total Consumption	905	905	675	675	1,000	1,000
Ending Stocks	234	234	100	100	200	200
Total Distribution	2,043	2,043	1,225	1,225	2,000	2,100
Yield	3.4376	3.4376	2.6712	2.6712	3.0159	2.8571
(1,000 HA), (1,000 MT), (MT/HA)						

Note: 'New Post' data reflects FAS/Canberra's assessment and is not official data.

RICE

Production

Australia's 2017/2018 rice production is forecast at 0.8 MMT. The harvest area is expected to be around 80,000 hectares, similar to last year. Water entitlements for the 2017/2018 season appear to be sufficient based on available information on dam capacity, although prices for temporary water licenses could increase over the year. The rice industry has storage capacity for more than 1 MMT.

Currently, rice farmers with general security water licences have access to around half of their allocations and many reportedly have access to water allowances carried over from the previous year. In addition, newly developed shorter season and more drought tolerant seed varieties are being widely introduced for 2017/18. These varieties reportedly allow rice farmers to widen their planting window from the traditional start in April. 2017/2018 yields are expected to be steady at 10 MT per hectare.

The rice industry is mainly based in NSW, but hopes to expand into the more water abundant regions in Queensland and northern Australia. Initial rice crops in Queensland have been developed mainly as a summer crop for sugar farmers. The Australian government has supported research into the viability of a northern Australian rice industry because of long-term problems with water availability and higher production cost in southern Australia.

Consumption

Post forecasts 2017/2018 rice consumption to be at 0.4 MMT, the same as the official forecast. Domestic demand for both rice meals and products is slowly expanding. Overall, the Australian population is growing slowly while demand for rice products is relatively steady.

Trade

2017/2018 rice exports are forecast at 0.3 MMT; similar to official estimates. Post notes that country data for exports is confidential.

Table 7: Production, Supply and Demand Estimates: Rice ('000 HA and '000 MT)

Rice, Milled	2015/2016		2016/2017		2017/2018	
Market Begin Year	Mar 2016		Mar 2017		Mar 2018	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	27	27	80	80	80	80
Beginning Stocks	223	223	77	77	228	228
Milled Production	197	197	586	586	576	576
Rough Production	274	274	814	814	800	800
Milling Rate (.9999)	7,200	7,200	7,200	7,200	7,200	7,200
MY Imports	167	167	155	155	155	155
TY Imports	163	163	155	155	155	155
TY Imp. from U.S.	11	11	0	0	0	0
Total Supply	587	587	818	818	959	959
MY Exports	140	140	200	200	300	300
TY Exports	165	165	180	180	325	325
Consumption and Residual	370	370	390	390	400	400
Ending Stocks	77	77	228	228	259	259
Total Distribution	587	587	818	818	959	959
Yield (Rough)	10.1481	10.1481	10.175	10.175	10	10
(1,000 HA), (1,000 MT), (MT/HA)						

Note: 'New Post' data reflects FAS/Canberra's assessment and is not official data.