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Australia

Grain and Feed Annual

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Report Highlights:
Australian wheat production in 2016/17 is forecast at 24 million MT, around the same level as the previous year. Similarly, barley production in 2016/17 is expected to be maintained at 8.5 million MT. For 2016/17, the sorghum harvest is expected to reach 2.2 million MT due to more favorable seasonal conditions. Demand from China for barley and sorghum for feed grain is likely to contract, while domestic feed demand for these crops is forecast to increase. In 2016/17, the rice crop is forecast to recover to 400,000 MT on a milled basis due to improved water availability and seasonal conditions.

EXECUTIVE SUMMARY:

Australian wheat production in 2016/17 is forecast at 24 million MT or about the same level as the previous year. Production of wheat in Western Australia is expected to reach normal assuming average rains, while Victoria is still recovering from a series of dry, hot seasons. Similarly, barley production in 2016/17 is expected to be at 8.5 million MT, around the same level as in 2015/16, despite a slight fall in the harvested area. The outlook for winter crops is improved by the Bureau of Meteorology forecast of above average autumn rainfall over nearly all of Australia for the coming months.

The outlook for summer crops also depends crucially on average seasonal conditions. For 2016/17, the sorghum harvest is expected to reach 2.2 million MT due to more favorable seasonal conditions. Demand from China for barley and sorghum for feed grain is expected to contract while demand for feed grain in Australia is expanding. In 2016/17, the rice crop is forecast to recover to 400,000 MT on a milled basis due to improved water availability and seasonal conditions.

SEASONAL CONDITIONS

Over late 2015, summer was very warm for much of Australia, with well above average mean temperatures and it also registered as the fourth-warmest summer ever recorded for mean minimum temperatures. In addition, a widespread heatwave resulted in record December temperatures in southeast Australia. Rainfall during summer was close to average, with all States except for South Australia but relatively low in western and central Victoria where soil moisture has still not recovered. Good conditions in Western Australia and South Australia have generally balanced the adverse impact on crop production in Victoria.

For 2016/17, the Bureau of Meteorology has forecast that the El Niño weather pattern is steadily declining in Australia, with models indicating a return to a neutral pattern in late autumn to early winter. Notably, from April to June, rainfall is more likely to be above average across Australia, thereby improving soil moisture levels. Details of these forecasts are given in the link and in Charts 1 and 2 below. As a result of this more favorable outlook, Post has maintained or increased its crop forecasts for Australian wheat, barley, sorghum and rice for 2016/17. Nevertheless, the continuing prevalence of hot, dry conditions in April remains a concern for the Australian grains industry.

Chart 1: Likelihood of above median rainfall from April to June 2016

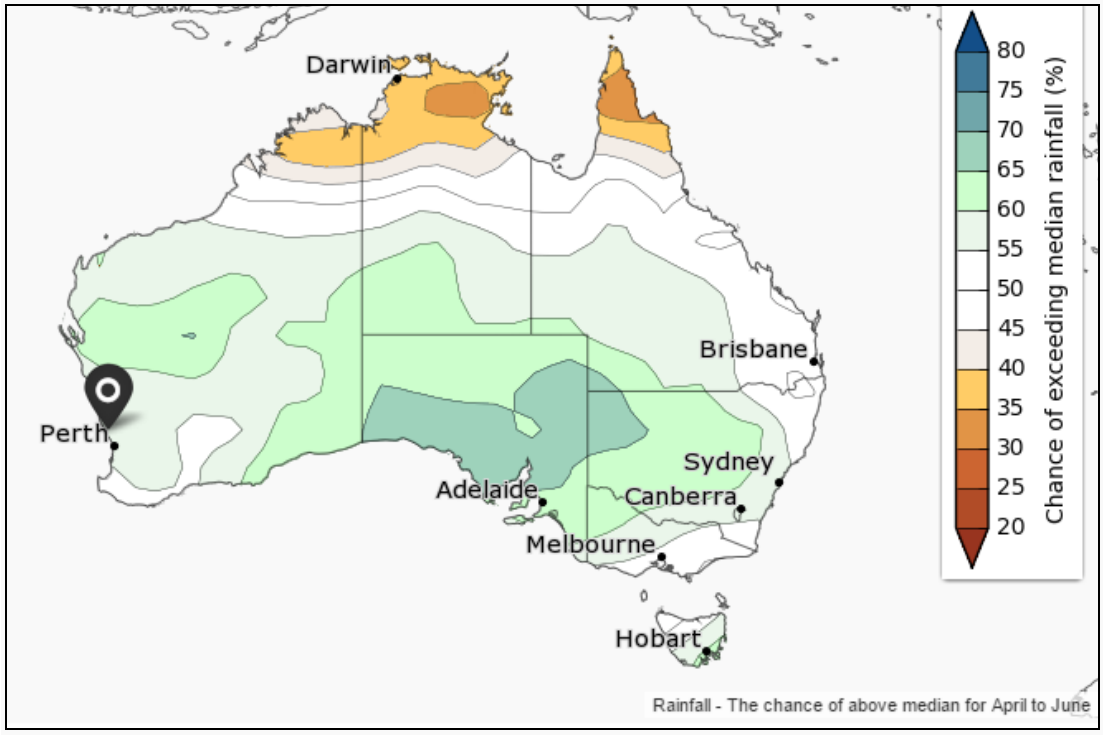
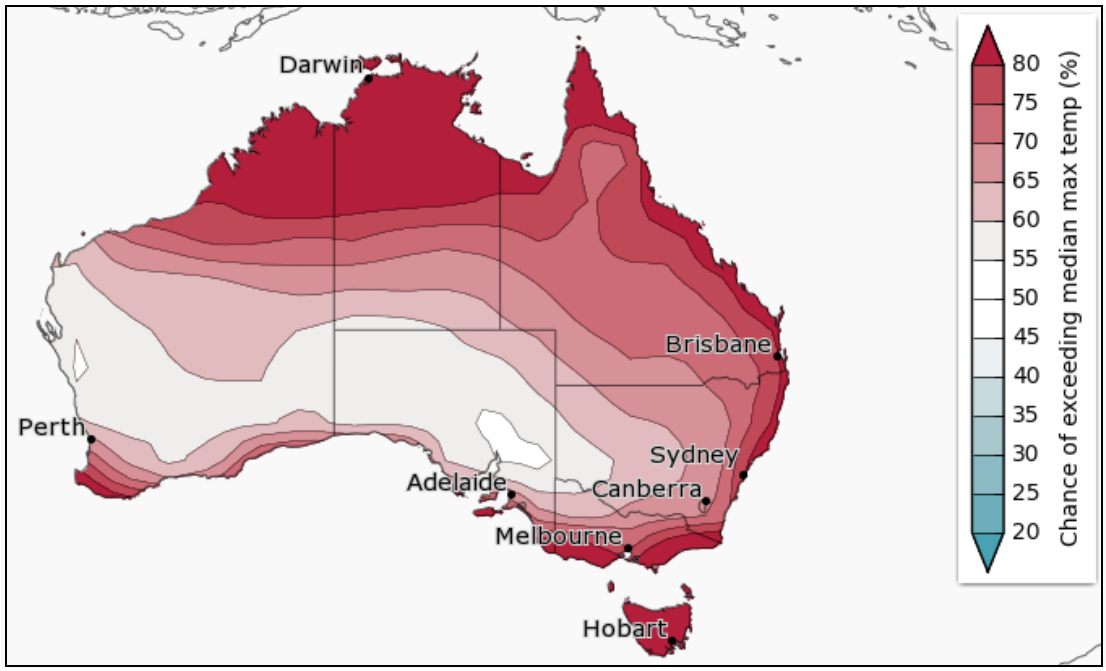


Chart 2: Likelihood of above median maximum temperature from April to June 2016



Source: Bureau of Meteorology (April, 2016).

Commodities:

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. Major types of wheat include Prime Hard, Hard, Premium White, Standard, Soft and Durum, based on protein, grain size and moisture content and each grain has different end-uses. Australia accounts for around 3.5 percent of annual global production and Western Australia accounts for over 40 percent of exports, while a greater proportion of the eastern coast wheat crop goes to domestic consumption.

Production

In 2016/17, wheat production is expected to be 24 million MT, the same as Post's estimate for 2015/16 which was slightly below the official forecast. The figure for 2015/16 has been revised because of an expansion in area harvested although yields are expected to be lower at around 1.7 MT per hectare in both years. This forecast assumes average rainfall and is supported by Bureau of Meteorology estimates of above median rainfall over 2016.

In 2015/16, national wheat production was adversely affected by limited summer rainfall in the Mallee and Wimmera areas of Victoria where substantial areas of crop were cut for hay. Very little of the Victorian wheat crop was classified as higher wheat grades, such as APH, H, APW or ASW. However in Western Australia, NSW and South Australia, the wheat harvest is expected to reach at least average levels, assuming favorable seasonal conditions.

Consumption

Wheat is Australia's major grain crop and is used for human consumption in the production of breads, noodles and pastas. Lower quality wheat is used as stock feed while some waste wheat starch is used to manufacture biofuel. In recent years, prices for feed grain have increased because of the record number of cattle in lot feeding facilities. Over 2015/16 the feed price has fallen. The volume of wheat allocated to the feed market has been increased by 200,000 MT in Post forecast for 2016/17 as a record one million cattle were in feedlots in early 2016.

Wheat consumption in Australia has been stable in recent years with around 70 kg of flour per capita consumed on average over the past decade. Flour producers face a mature domestic market. The biggest milling companies in Australia are Allied Mills, George Weston Foods and Manildra.

Trade

Exports in 2016/17 are expected to reach 17.5 million MT over the marketing year. In 2015/16, wheat exports are forecast at 17 million MT, the same as the official estimate for that year. Australia faces greater competition in some of its traditional markets such as Indonesia, where Black sea exporters have doubled their share of the Indonesian import market, with a 16 percent share in 2015 compared to Australia's 58 percent market share. However, regional market shares in Malaysia, Vietnam and other countries remains resilient although the Japanese market has become less important. Vietnam currently imports about three quarters of their requirements from Australia.

In 2015/16, Australia was the ninth largest wheat producer in the world and the fifth largest exporter. Around 80 percent of Australian wheat production is exported, with WA the leading State. Around half of wheat grown in eastern Australia is consumed locally, while 90 percent of grain produced in Western Australia and South Australia is exported. The major export markets are in the Asian and Middle East regions and include Indonesia, Japan, South Korea, Malaysia, Vietnam and Sudan.

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	17,086
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	1,068
China	705	794	2,283	870	1,198	1,378
Sudan	627	568	813	849	558	208
Yemen	937	713	859	816	850	1,048
Malaysia	810	952	934	721	1,051	891
Iran	61	0	848	652	1,048	153

Note: Calendar years.
Source: Global Trade Atlas.

An increase in export capacity has occurred in Australia, with multiple new port facilities and over the past five years, Australia has added 4 million MT of bulk export capacity. Most of Australian wheat is exported in bulk cargoes. The top ten importing markets account for 80 percent of exports.

Production, Supply and Demand Data 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	12155	13810	12750	13800	0	13800
Beginning Stocks	4558	4558	4003	3983	0	4108
Production	23076	23075	24500	24200	0	24000
MY Imports	159	155	150	150	0	150
TY Imports	162	155	160	150	0	150
TY Imp. from U.S.	3	3	0	0	0	0
Total Supply	27793	27788	28653	28333	0	28258
MY Exports	16590	16605	17000	17000	0	17500
TY Exports	16575	16575	16500	16500	0	17000
Feed and Residual	3800	3800	3800	3800	0	4000
FSI Consumption	3400	3400	3425	3425	0	3425
Total Consumption	7200	7200	7225	7225	0	7425
Ending Stocks	4003	3983	4428	4108	0	3333
Total Distribution	27793	27788	28653	28333	0	28258
(1000 HA) ,(1000 MT)						

Commodities:

BARLEY

Production

In 2016/17, Australian production of barley is forecast to be stable at 8.5 million MT, the same level as forecast by Post for 2015/16. Yields have been stable at 2.1 MT per hectare since 2014/15. The area harvested in 2016/17 is forecast to be 4 million hectares.

In 2015/16, low subsoil moisture and dry conditions in Victoria limited barley yield potential and a significant part of the barley crop was downgraded to feed standard. However, production in Western Australia, NSW and South Australia held up, preventing a further downgrading of the crop. Early maturing varieties such as Hindmarsh, LaTrobe, Fathom, Compass and the new variety Rosalind generally yielded better than varieties like Buloke, Scope and Gairdner which were more vulnerable to drought stress.

Around forty percent of barley produced in Western Australia is delivered as malting grade destined for the Japanese, Chinese and Indian beer markets with the remaining 60 percent delivered as feed grade, most of which is exported to the Middle East. The State is a leading supplier of malting barley to China and Shochu barley to Japan and a major supplier of feed barley to the Middle East and China.

Trade

In 2016/17, barley exports are forecast by Post at 6.0 million MT based on steady production and yields. Australia normally supplies around 30 percent of global trade in malt barley and 20 percent of trade in feed barley. China is the major market for Australian barley exports, but demand fell in 2015/16 after a sharp rise the previous year. While Chinese demand for malting barley is not expected to decline, demand for feed grain accounts for a significant share of exports to China and could be adversely affected by recent developments.

Table 2: 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
United Arab Emirates	305	160	350	130	105	42

Note: Calendar years.
Source: Global Trade Atlas.

Since 2014/15, China has accounted for almost half of global sorghum and barley imports and almost all of Australian sorghum exports. Demand for Australian feed barley is expected to fall due to changes in

China's price support scheme for corn. There is therefore uncertainty about export demand and the forecast for Australian barley exports in 2016/17 has been reduced to 5.5 million MT. However, strong domestic demand exists for sorghum and barley in Australia to be used as feed grain by east coast livestock producers. Therefore, Post has increased the feed and residual forecast for 2016/17 from 1.3 million MT to 1.5 million MT.

Chart 3: World wheat prices for Australian producers, 2014-16 (US$/MT)

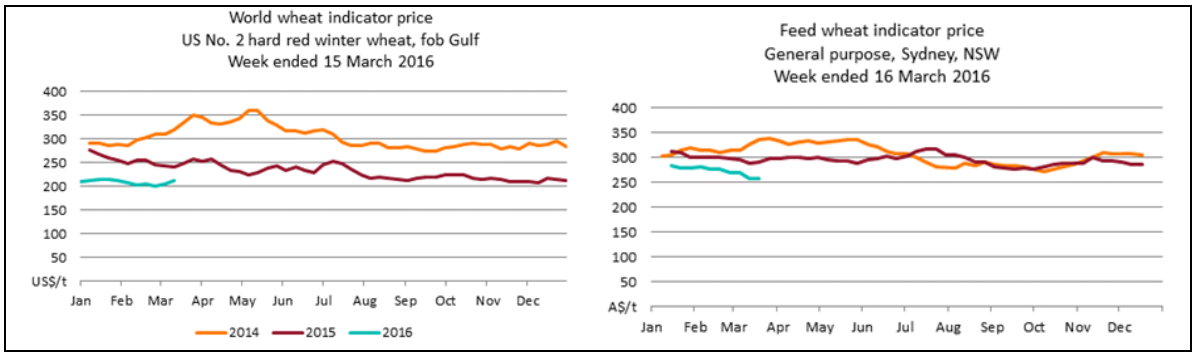
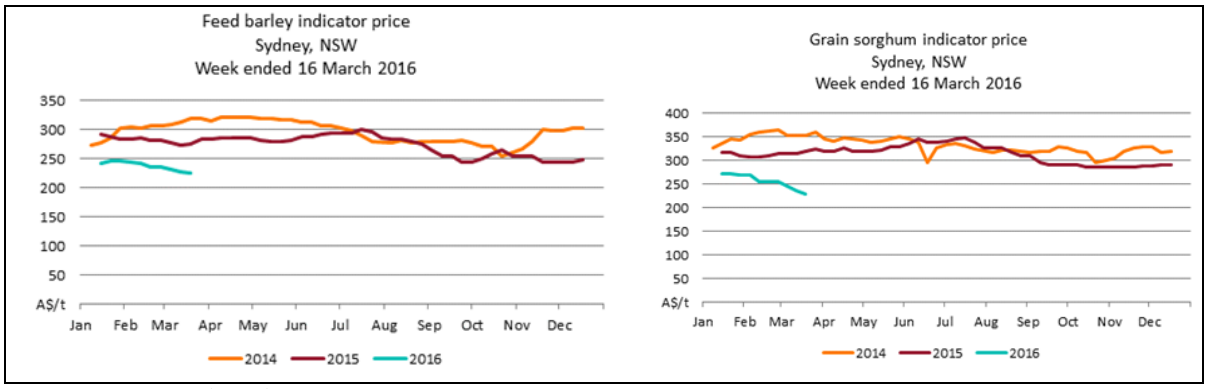


Chart 4: Domestic feed barley prices for producers, 2014-16 (A$/MT)

Chart 5: Grain sorghum prices for Australian producers, 2014-16 (A$/MT)



Source: ABARES (2016).

Production, Supply and Demand Data 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	3836	3836	4100	4000	0	4000
Beginning Stocks	693	693	588	588	0	688
Production	8014	8014	8700	8500	0	8500
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	8707	8707	9288	9088	0	9188
MY Exports	5219	5219	5800	5800	0	5800
TY Exports	5266	5266	5500	5500	0	5500
Feed and Residual	1600	1600	1300	1300	0	1500
FSI Consumption	1300	1300	1300	1300	0	1300
Total Consumption	2900	2900	2600	2600	0	2800
Ending Stocks	588	588	888	688	0	588
Total Distribution	8707	8707	9288	9088	0	9188
(1000 HA) ,(1000 MT)						

Commodities:

SORGHUM

Production

In 2016/17, Post forecasts Australian sorghum production to reach 2.2 million MT, slightly above the revised official estimate for the previous year. Yields are likely to be stable while the area harvested is forecast at 700,000 hectares for both years. Sorghum is a summer crop mainly used for livestock feed. In recent years, China has been a major market for Australian sorghum, mainly for stockfeed, but demand is expected to fall in 2016/17 in response to the release of the corn stockpile in China. Post has therefore increased the forecast for feed demand in 2016/17 to 1.2 million MT, slightly above the official estimate for 2015/16 of 1.1 million MT.

Australia normally produces around two to three percent of global sorghum output and accounts for five percent of global exports. Sixty 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. The grain, stalks and leaves are all used for animal feeding products.

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.

Exports

In 2016/17, sorghum exports are forecast to remain stable at one million MT although there is some uncertainty about this estimate given recent changes in Chinese policy, as mentioned above. However, Australia may be a preferred source for sorghum as it has earlier harvests than a number of competing suppliers and the China-Australia Free Trade Agreement (ChAFTA) removed a two percent tariff on commencement of the agreement in late 2015.

Table 3: 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

Production, Supply and Demand Data Statistics:

Sorghum	**2014/2015**		**2015/2016**		**2016/2017**	
Market Begin Year	**Mar 2015**		**Mar 2015**		**Mar 2016**	
Australia	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Area Harvested	651	651	700	700	0	700
Beginning Stocks	187	187	136	136	0	131
Production	2104	2104	2100	2100	0	2200
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	2291	2291	2236	2236	0	2331
MY Exports	1650	1650	1000	1000	0	1000
TY Exports	1699	1699	1000	1000	0	1000
Feed and Residual	500	500	1100	1100	0	1200
FSI Consumption	5	5	5	5	0	5
Total Consumption	505	505	1105	1105	0	1205
Ending Stocks	136	136	131	131	0	126
Total Distribution	2291	2291	2236	2236	0	2331
(1000 HA) ,(1000 MT)						

Commodities:

RICE, MILLED

Overview

There are around 1,500 rice farming concerns in Australia 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 and commercial availability from May. Most 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 above ten MT per hectare. This yield assumes average seasonal conditions and water availability. In recent years, water availability has been a significant problem for the Australian rice industry, with production in 2015/16 well below average because of the higher cost of water allocations in NSW.

Water cost and availability has been a factor encouraging the industry to expand into more water abundant regions in Queensland and northern Australia. Already some Queensland sugar growers are beginning to incorporate rice into their sugarcane rotation and up to 3,000 hectares are expected to be eventually harvested. The rice growing area in Queensland extends through the whole of tropical North Queensland from Tully down to Mackay, with the main growing regions being the Burdekin, Mackay and Tully.

Production

In 2016/17, Australia's rice crop is expected by Post to be 400,000 MT on a milled basis, significantly above the previous year's official estimate of 216,000 MT. Increased production is expected for a number of reasons. These include a significant carryover of untraded water entitlements from the previous season and a high price for rice of A$415/MT which is guaranteed by the industry body SunRice. The area harvested is expected to be around 50,000 hectares, with an average yield of eleven MT per hectare.

The forecast for 2016/17 is dependent upon good soil moisture, which seems likely given above median rainfall forecasts by the Bureau of Meteorology for the three-month period April to June. Similarly, the forecast assumes that water allocations announced in mid-July 2016 will be at least at the level of the previous season. This assumption is supported by an apparent pause in the federal government's environmental water entitlement purchases. A recent report's suggested that a quarter of the increase in water allocation prices in the southern Murray- Darling Basin over the past 5 years was due to the program, although the prolonged dry season was the major factor in causing higher water prices.

The timing of the water allocation decisions is also important as late allocations in the 2015/16 season affected the incidence of planting during the available window for the rice crop. For this season,

general security water allocations in the Murray Valley were only around 20 percent of entitlements at the time of the rice planting window from September to October 2015. Subsequently, the water entitlement increased to 35 percent but many rice farmers had already decided not to plant rice for the 2015/16 season, with some deciding to sell their existing water entitlements.

Post expects that Australia's rice production in 2015/16 will be 260,000 MT on a milled basis, about 20 percent above the official estimate for this year. Post has increased this estimate because of the high yield of around 12 MT per hectare likely to be achieved on an area harvested of 30,000 hectares, with rough production of around 360,000 MT. The high yield reflects the high productivity of the remaining rice growing areas in 2015/16.

Consumption

The majority of rice grown in Australia is sold to the Ricegrowers cooperative and is then marketed under the SunRice brand. Typically, rice is used in higher value branded products which provides a buffer against exchange rate fluctuations and water price variations.

Trade

Exports for 2016/17 are forecast at 250,000 MT because of higher production and area harvested. Rice stocks are expected to continue to fall because of lower production since the 2014/15 season. In 2015/16, Post has estimated rice exports at 200,000 MT, slightly above the official forecast; in view of higher than expected production and yields in that year. Country details of exports are not readily available because of confidentiality provisions.

Production, Supply and Demand Data 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	71	71	30	30	0	50
Beginning Stocks	241	241	182	182	0	92
Milled Production	521	521	216	260	0	400
Rough Production	724	724	300	361	0	556
Milling Rate (.9999)	7200	7200	7200	7200	0	7200
MY Imports	150	150	180	180	0	180
TY Imports	136	136	180	180	0	180
TY Imp. from U.S.	11	11	0	0	0	0
Total Supply	912	912	578	622	0	672
MY Exports	370	370	180	200	0	250
TY Exports	323	323	180	200	0	250
Consumption and Residual	360	360	330	330	0	360
Ending Stocks	182	182	68	92	0	62
Total Distribution	912	912	578	622	0	672
(1000 HA) ,(1000 MT)						