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## Australia

### Grain and Feed Update

**October 2015**

**Approved By:**

Roger Farrell, Agricultural Specialist

**Prepared By:**

Roger Farrell, Agricultural Specialist

**Report Highlights:**

The outlook for winter grains production in Australia has deteriorated because of particularly adverse seasonal conditions, including lower than expected spring rainfall and record temperatures. In 2015/16, wheat production is revised downwards to 24 million metric tons; while barley production is expected to fall slightly to 8.5 million tons. The outlook for summer crops also depends on the changed seasonal outlook. Sorghum production is forecast to decline slightly to two million tonnes but further revisions are possible if the El Niño weather pattern intensifies. Rice production is constrained by water availability in southern Australia, but is slowly expanding in Queensland. The official 2015/16 forecast of 470,000 tonnes of milled rice is unchanged.

**Post:**  
Canberra

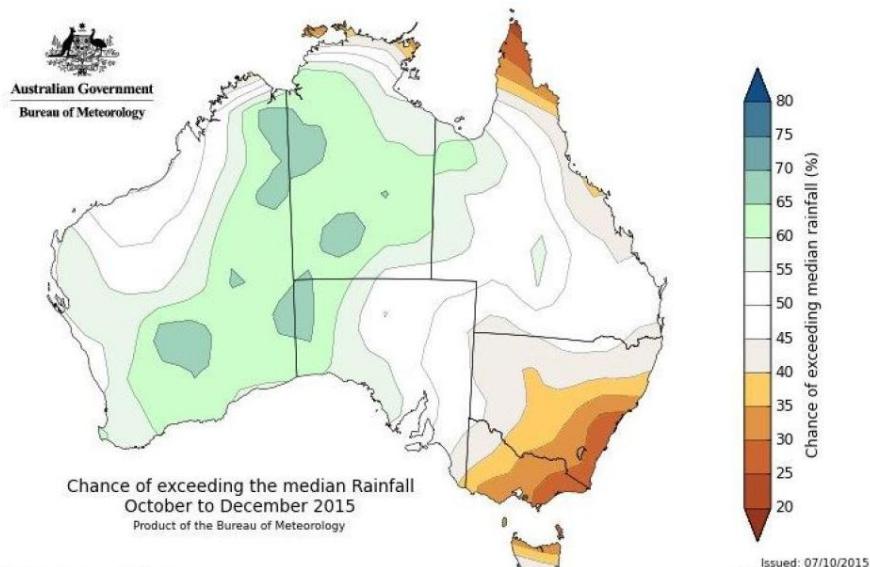
**Commodities:**  
Wheat  
Barley  
Sorghum  
Rice, Milled

## SEASONAL OUTLOOK

The *El Niño* weather pattern brought low rainfall and high temperatures to eastern Australia in September and October and has significantly affected the Australian grain harvest in 2015/16. Some grains producing regions received their lowest ever rainfall in September and temperatures during the month broke historic highs. In the first week of October, grain crops in eastern Australia received no rain and temperatures reached over 30 degrees celsius, while high winds were also prevalent. These conditions have caused some winter crops to be downgraded to feed grain and doubts remain over likely production and yields in a number of regions.

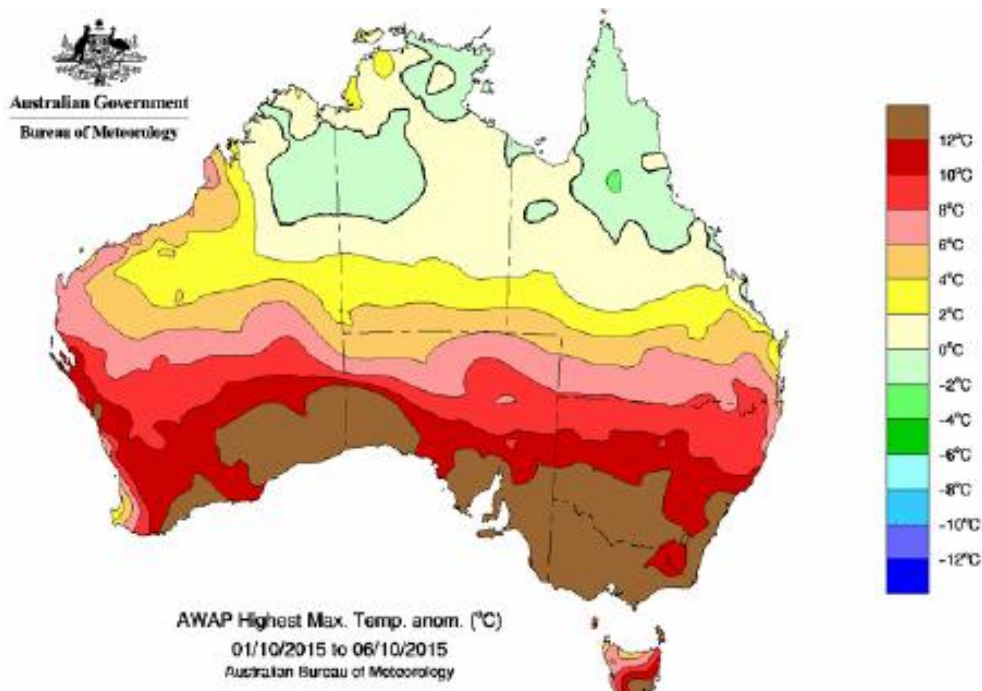
On early 2015 October, the Bureau of Meteorology significantly revised its previous seasonal outlook for October and issued an [El Niño update](#) which warned of worsening seasonal conditions. As a result, Post has revised downwards forecasts for winter grains production in Australia. Official and private crop forecasters have also adjusted crop production estimates. The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) for example [expects](#) that winter crops would decline by at least ten percent in Victoria and South Australia, with five percent falls in NSW and Western Australia, as a result of these unexpectedly adverse seasonal conditions.

**Chart 1: Chance of exceeding median rainfall, October to December 2015**



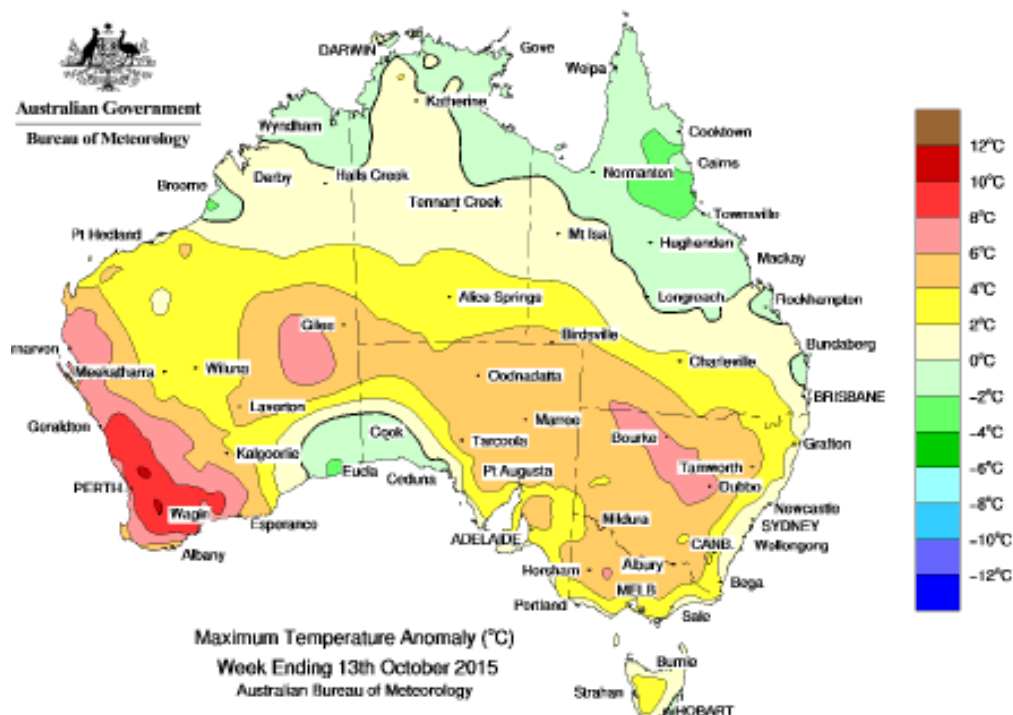
Source: Australian Bureau of Meteorology Update (2015).

**Chart 2: Maximum temperature anomalies of hottest days, 1-6 October 2015**



Source: Australian Bureau of Meteorology Update (2015).

**Chart 3: Maximum temperature anomalies for the week ending 13 October 2015**



Source: Australian Bureau of Meteorology Update (2015).

## WHEAT

### Production

Australian wheat production forecast for 2015/16 is revised to 24 million tons due to adverse seasonal conditions across the country. The changing outlook for grains production was highlighted by an [El Niño update](#) from the Bureau of Meteorology which warned of worsening conditions for wheat and other winter crops. The revised BOM forecast warned of drier and warmer than average conditions until the end of the year. Consequently, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) revised its [forecasts](#) for winter crops, as have other industry experts. In 2015/16, wheat yields are expected to average 1.7 tons per hectare or below due to lower than expected soil moisture in some regions.

Across Australia, the seasonal impact on wheat crops varies, with a ten percent decline in production expected in a number of States. The earlier wheat season in Queensland has helped protect wheat crops from drier seasonal conditions with harvesting already begun in central and south-western areas of the State. In southern NSW, low rainfall and higher than average temperatures have lowered crop expectations. In Victoria, these conditions have affected the whole State but especially the Wimmera and Mallee regions where soil moisture was already poor. Similarly, wheat growing areas of northern South Australia and eastern Western Australia have received below average rainfall and record temperatures since the beginning of spring and this trend has continued into October.

Wheat is typically sown from April to July and grows through the winter months. Harvesting begins in central Queensland during August and continues along the east coast to Victoria until January. In Western Australia, the wheat harvest begins in October and finishes by mid-January. Wheat is the major grain grown in Australia which accounts for an estimated three percent of world production.

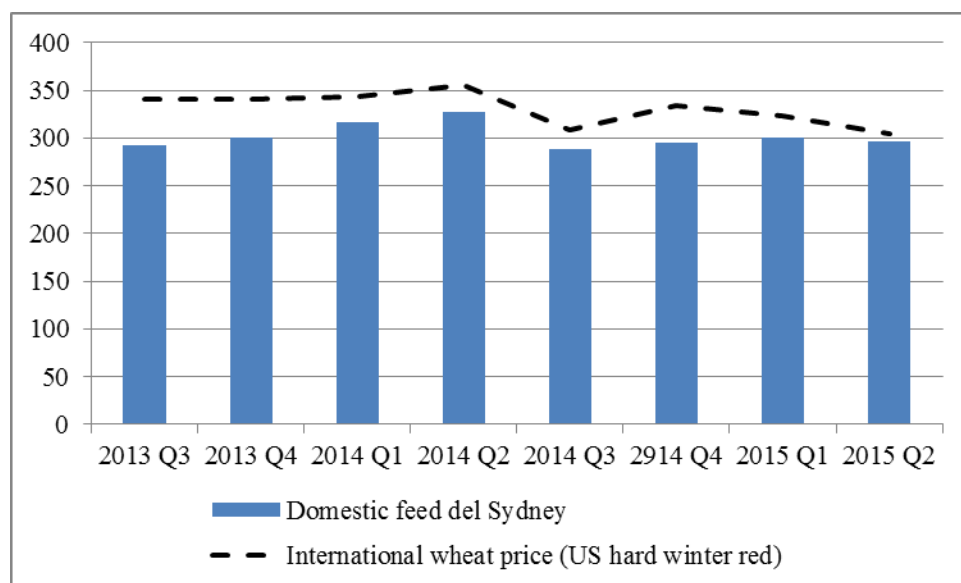
### Consumption

Wheat is Australia's major grain crop and is used in the production of breads, noodles and pastas. Lower quality wheat is used as stock feed while a small proportion of waste wheat starch is used to manufacture biofuel. 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

Australian wheat exports in 2015/16 are expected to decline to 17.5 million tons, due to adverse seasonal conditions which have affected production. High domestic feed grain prices could also lead to a diversion from exports although international wheat prices for Australian farmers recently reached the highest level in six years at A\$320 per ton.

**Chart 4: Domestic and international wheat prices (A\$/t), 2014-2015**



Source: ABARES (2015), Australian Crop Report, September.

Australia is the seventh largest wheat producer in the world and the fourth largest exporter. Over 70 percent of Australian wheat production is normally exported, with WA the leading exporting state. 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 for Australia 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, 2010-2014 ('000 metric tons)**

	2010	2011	2012	2013	2014
World	15,852	19,684	23,530	18,037	18,276
Indonesia	3,707	3,578	4,585	3,665	4,072
Iraq	247	1,022	561	1,724	810
Vietnam	1,309	2,402	1,992	1,347	1,377
Japan	1,074	1,263	1,367	947	933
South Korea	957	1,935	2,072	892	1,062
China	705	794	2,283	870	1,198
Sudan	627	568	813	849	558
Yemen	937	713	859	816	850
Malaysia	810	951	934	721	1,051
Iran	61	0	848	652	1,048

Note: Calendar years

Source: Global Trade Atlas.

### Production, Supply and Distribution Statistics:

Wheat	2013/2014		2014/2015		2015/2016	
Market Begin Year	Oct 2013		Oct 2014		Oct 2015	
Australia	USDA Official	New post	USDA Official	New post	USDA Official	New post
Area Harvested	12,631	12,631	13,810	13,810	13,800	13,800
Beginning Stocks	4,663	4,663	4,557	4,557	4,178	4,178
Production	25,303	25,303	23,666	23,666	27,000	24,000
MY Imports	156	156	155	155	150	150
TY Imports	152	152	159	155	160	150
TY Imp. from U.S.	3	3	3	3	0	0
Total Supply	30,122	30,122	28,378	28,378	31,328	28,328
MY Exports	18,615	18,615	16,700	16,700	19,000	17,500
TY Exports	18,339	18,339	16,575	16,575	18,500	17,000
Feed and Residual	3,600	3,600	4,100	4,100	3,900	4,000
FSI Consumption	3,350	3,350	3,400	3,400	3,425	3,425
Total Consumption	6,950	6,950	7,500	7,500	7,325	7,425
Ending Stocks	4,557	4,557	4,178	4,178	5,003	3,403
Total Distribution	30,122	30,122	28,378	28,378	31,328	28,328

1000 HA, 1000 MT, MT/HA

## **BARLEY**

### **Production**

Australian barley production is now expected to fall slightly below the official estimate for 2015/16 to 8.5 million tonnes due to poor seasonal conditions in major growing areas, including Western Australia, South Australia and Victoria. The comparatively modest revision in barley production reflects an increase in the harvest area for barley from 3.8 to four million hectares, although barley yields are likely to decline slightly. Worsening seasonal conditions could lead to a larger downward revision in production and yield estimates for 2015/16.

Barley is typically sown during May and June and grows through the winter months often in rotation with wheat, canola, pulses and oats. Harvesting can begin in northern areas during October and is completed by December in more southern parts of Australia. Australia usually produces around 900,000 tonnes of malt each year with 200,000 tonnes consumed locally and the remainder exported, mostly to customers in Asian markets.

### **Consumption**

Australia produces two-row spring barley with moderate protein content which is used in the malting, brewing, distilling and feed industries. Malt barley is for human consumption, while feed barley is for animal feed. Malt from barley is used in beer and liquor production while malt extract is used in the food industry. Harvested grain typically has relatively low moisture content and has good storage potential. The barley industry operates under a voluntary accreditation system which evaluates new barley varieties in order to gain accreditation as a malting variety.

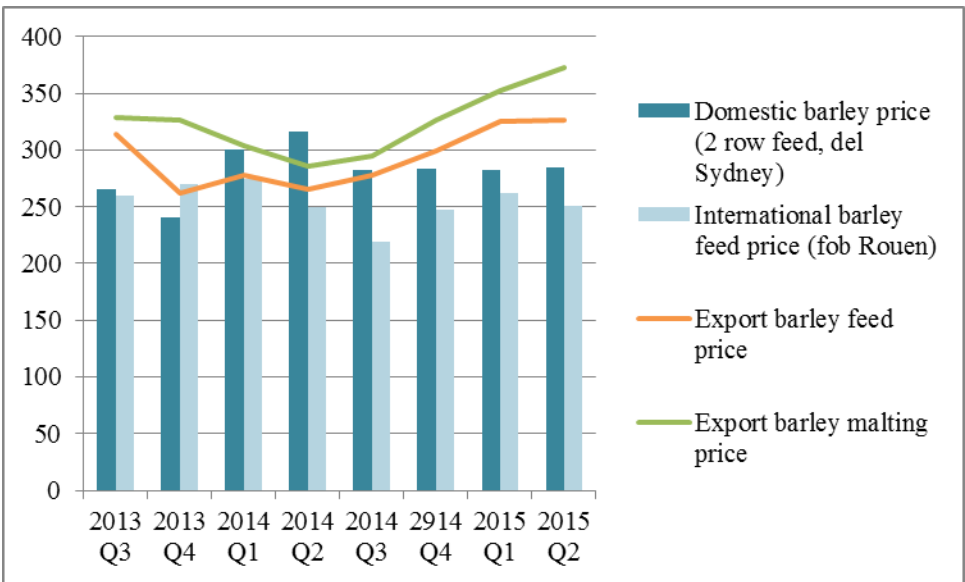
### **Trade**

In 2015/16, barley exports are expected to be stable at the official forecast of six million tonnes despite a slight decline in production due to adverse seasonal conditions. Australia normally supplies around 30 percent of global trade in malt barley and 20 percent of global trade in feed barley. Australia's three largest identified barley importers are China, Saudi Arabia and Japan, although a fourth unidentified country ranked second as an export market in 2014. Official USDA export estimates for Australia were revised upwards from 4.5 million tons to 5.5 million tons for 2014/15.

Chinese demand for barley has increased sharply in recent years, both for feed grain and for other uses. One reason for stronger Chinese demand was the Chinese government's 2014 ban on US and Argentinian GM corn, which led feed grain merchants in China to substitute feed barley and sorghum for corn. The recent China-Australia Free Trade Agreement (ChAFTA) provides for the removal of a three percent duty on Australian barley imported into China and will be implemented before the end of the year. This tariff removal is likely to contribute to a further increase in exports to China.



**Chart 5: Domestic and international barley prices (A\$/t), 2013-2015**



Source: ABARES (2015), Australian Crop Report, September

Under the Japan–Australia Economic Partnership Agreement (JAEPA), Australian exports of feed barley now enter the Japanese market tariff free. Further, special safeguard measures will no longer apply to imports of Australian feed barley. The JAEPA also created an Australia-only duty-free quota for unroasted malt of 8,600 tons from 15 January 2015 to 31 May 2015, with the quota limit growing to 86,000 tons by April 2024. These developments are expected to strengthen Japan’s position as an export market for Australian barley exporters.

**Technology**

Australian barley farmers have increased productivity through the development of new crop varieties, conservation farming and the use of new technology such as GPS guidance systems. These innovations have contributed to increased yields and reduced labor needs. This trend has also encouraged industry consolidation and an increase in average farm size.



## Production, Supply and Distribution Statistics:

Barley	2013/2014		2014/2015		2015/2016	
Market Begin Year	Nov 2013		Nov 2014		Nov 2015	
Australia	USDA Official	New post	USDA Official	New post	USDA Official	New post
Area Harvested	3,814	3,814	3,836	3,836	4,000	4,000
Beginning Stocks	539	539	697	697	511	511
Production	9,174	9,174	8,014	8,014	8,900	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	9,713	9,713	8,711	8,711	9,411	9,011
MY Exports	6,216	6,216	5,600	5,600	6,000	6,000
TY Exports	6,262	6,262	5,500	5,500	6,000	6,000
Feed and Residual	1,500	1,500	1,300	1,300	1,300	1,300
FSI Consumption	1,300	1,300	1,300	1,300	1,300	1,300
Total Consumption	2,800	2,800	2,600	2,600	2,600	2,600
Ending Stocks	697	697	511	511	811	411
Total Distribution	9,713	9,713	8,711	8,711	9,411	9,011

1000 HA, 1000 MT, MT/HA

**Table 2: Australian barley exports by country, 2010-2014 ('000 metric tons)**

	2010	2011	2012	2013	2014
World	3,950	5,058	5,111	5,121	6,123
China	1,392	1,268	2,102	1,766	3,795
Saudi Arabia	761	1,667	1,153	1,702	471
Japan	1,067	962	769	967	575
Kuwait	199	336	185	175	111
United Arab Emirates	305	160	350	130	122
Oman	30	23	53	55	45
Jordan	0	153	52	53	0
South Korea	34	51	58	46	59
Taiwan	46	30	52	39	32
Vietnam	16	15	81	32	36
Unidentified country	0	0	0	0	701

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*Note: Calendar years.*  
*Source: Global Trade Atlas.*

## SORGHUM

### Production

In 2015/16, sorghum production in Australia is forecast at two million tons, slightly below the official forecast of 2.1 million tonnes. Adverse seasonal conditions in Queensland and northern NSW are expected to lead to a decline in yields below three tonnes per hectare. Further downwards revisions to production and yields are possible for 2015/16 unless more reliable rainfall occurs over the growing season.

Sorghum is a summer crop used for livestock feed, liquor production and food manufacturing. Around two thirds of sorghum is grown in Queensland and the remainder in northern NSW. Planting times are from September to January and harvest occurs from March to May each year. Sorghum is classified as either grain sorghum or forage sorghum according to the tannin content.

Sorghum is often seen as an 'opportunity' crop because it is comparatively drought tolerant and can be sown when the outlook for other crops is less positive. Demand for sorghum has been mainly from the livestock industry, because of continuing drought in Queensland and northern NSW. More recently, demand has increased for sorghum as a feed grain for overseas livestock industries, especially in China. In Australia, a small part of production of grain sorghum is used to make products such as gluten free breakfast cereals for the domestic market.

### Exports

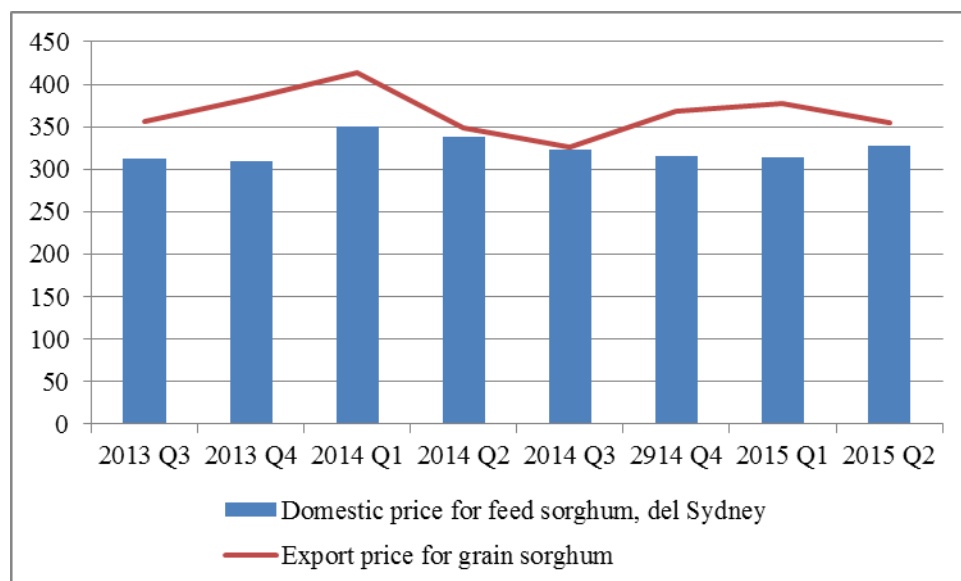
The volume of Australian grain sorghum exports for 2015–16 is forecast at 900,000 tonnes. Export demand for sorghum is expected to be sustained but domestic supply will be affected by seasonal conditions and a slight fall in expected production.

**Table 3: Australian sorghum exports by country, 2010-2014 ('000 metric tons)**

	2010	2011	2012	2013	2014
World	51	116	205	797	356
China	25	0	39	758	349
Taiwan	10	19	34	13	3
Japan	1	39	1	13	..
Philippines	4	3	5	7	2
New Zealand	0	16	27	2	0
Share (%)	100.0	100.0	100.0	100.0	100.0
China	49.0	0	19.0	95.1	98.0
Taiwan	19.6	16.4	16.6	1.6	0.8
Japan	2.0	33.6	..	1.6	0
Philippines	7.8	2.6	2.4	0.9	0.6
New Zealand	0	13.8	13.2	0.3	0

Source: Global Trade Atlas.

**Chart 6: Domestic and international prices for sorghum (A\$/t), 2013-15**



Source: ABARES (2015), Australian Crop Report, September.

### Production, Supply and Distribution Statistics:

Sorghum	2013/2014		2014/2015		2015/2016	
Market Begin Year	Mar 2013		Mar 2014		Mar 2015	
Australia	USDA Official	New post	USDA Official	New post	USDA Official	New post
Area Harvested	532	532	651	651	700	700
Beginning Stocks	195	195	187	187	186	186
Production	1,282	1,282	2,104	2,104	2,100	2,030
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	1,477	1,477	2,291	2,291	2,286	2,216
MY Exports	385	385	1,500	1,500	900	900
TY Exports	405	405	1,700	1,700	900	900
Feed and Residual	900	900	600	600	1,200	1,200
FSI Consumption	5	5	5	5	5	5
Total Consumption	905	905	605	605	1,205	1,205
Ending Stocks	187	187	186	186	181	111
Total Distribution	1,477	1,477	2,291	2,291	2,286	2,216

1000 HA, 1000 MT, MT/HA
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## RICE

### Production

The official production forecast for the 2015/16 rice crop is unchanged. The rice crop is expected to be 470,000 tonnes on a milled basis with the harvest area stable. There are still a number of uncertainties over water access for rice growers, especially in the main southern growing region. In Queensland, the revival of rice growing is still comparatively small in scale but there is potential for expansion as sugar growers plant rice as a supplementary crop to offset relatively low world sugar prices.

In the 2014/15 season, rice growers were only able to access around 40 percent of their general water entitlement because of demand from other quota holders with more assured access. In October 2015, there was a small increase to water allocations in the main NSW rice region but high temporary water prices could still deter rice sowing during this month. Currently, rice growers without permanent water entitlements need to buy water at up to A\$270 a megaliter and some growers could decide to sow alternative crops such as cotton. The major processor SunRice has increased the guaranteed price it will pay farmers to encourage rice growers to expand production for 2015/16. It is not yet clear if this will have a significant impact on production.

Australian rice crops are planted in October and November and then harvested in April and May. Once harvested, unmilled or paddy rice is stored and dried prior to milling. Rice is then categorized according to variety, moisture levels, grain size and color. Rice is then milled as either brown rice, with the rice husk removed, or further processed as white rice after the removal of the germ and bran layers from the grain.

There are around 1,500 rice farming concerns in Australia and the average size of a rice farm is 400-500 hectares. Most of the rice produced is medium and short grain *japonica* varieties, while long grain varieties are imported. Typically, winter crops such as wheat are planted in rice farms to utilize remaining water availability. Yields for irrigated rice crops are 10-11 tonnes per hectare and around four tonnes per hectare for the supplementary wheat crop.

#### *Rice production in Queensland*

Rice production in Queensland is expected to increase over time, albeit from a small base. The industry body SunRice has acquired rice milling assets in the Burdekin River region of North Queensland. This region holds Queensland's largest dam and irrigation network and could support a significant expansion of rice production over the longer term. The industry has estimated that a further 10,000 tons of rice could be produced annually in northern Australia over the next few years. The Mackay region in Queensland harvested its first commercial rice crop in July and an increased number of cane growers will plant rice as a supplementary summer crop, partly because of low sugar prices this year. The second Mackay rice crop will be harvested in December using the *doongara* variety of rice which requires much less water.

## Consumption

Demand for rice in Australia is comparatively mature and stable and is supplied by domestic production of medium grain rice and imports of other varieties of rice. Imports are mainly from Thailand, Pakistan and India and include fragrant rice varieties such as basmati rice. The rice industry is expanding into products such as microwave rice meals and snack foods.

## Trade

Around 80 percent of the Australian rice crop is exported as a bulk commodity, with an annual value of over A\$250 million. In 2015/16, Australian rice exports are expected to be 330,000 tons because of production limits due to water availability. The composition of trade by export markets is not published in official trade statistics due to confidentiality provisions. Details of imports of rice into Australia are given in the table below.

**Table 4: Australian milled rice imports by country, 2010-2014 ('000 metric tons)**

	2010	2011	2012	2013	2014
World	193	160	134	142	156
Thailand	121	95	68	69	81
India	13	16	23	27	30
Pakistan	22	21	18	19	18
United States	21	11	12	13	11
Vietnam	7	8	6	6	8

*Source: Global Trade Atlas.*



### Production, Supply and Distribution Statistics:

Rice, Milled	2013/2014		2014/2015		2015/2016	
Market Begin Year	Mar 2012		Mar 2014		Mar 2015	
Australia	USDA Official	New post	USDA Official	New post	USDA Official	New post
Area Harvested	75	75	71	71	66	66
Beginning Stocks	238	238	241	241	182	182
Milled Production	590	590	521	521	470	470
Rough Production	819	819	724	724	653	653
Milling Rate (.9999)	7,200	7,200	7,200	7,200	7,200	7,200
MY Imports	155	155	150	150	150	150
TY Imports	155	155	150	150	150	150
TY Imp. from U.S.	11	11	0	0	0	0
Total Supply	983	983	912	912	802	802
MY Exports	385	385	370	370	330	330
TY Exports	404	404	400	400	330	330
Consumption and Residual	357	357	360	360	370	370
Ending Stocks	241	241	182	182	102	102
Total Distribution	983	983	912	912	802	802

1000 HA, 1000 MT, MT/HA