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Report Highlights:

Beneficial and widespread rainfall in early 2020 has increased prospects for a good start to the Australian grain sowing season. This follows two years of below-average grain crops as a result of drought conditions in eastern Australia. For wheat, production is forecast at 23 million metric tons (MMT) in marketing year (MY) 2020/21, more than 50 percent larger than the MY 2019/20 crop. This is due to both expected higher planted acreage, as well as improved yields. Wheat exports are forecast to rise to 14.5 MMT in MY 2020/21, from 8.2 MMT in MY 2019/20. Barley, sorghum, and rice production and exports are also all forecast to rise in MY 2020/21.

Executive Summary

Beneficial and widespread rainfall in early 2020 has created the prospect for a good start to the grain sowing season. This follows two years of below average grain crops as a result of drought conditions in eastern Australia. For wheat, production is forecast at 23 million metric tons (MMT) in marketing year (MY) 2020/21, more than 50 percent larger than the MY 2019/20 crop. This is due to both expected higher planted acreage, as well as improved yields. Barley production is also forecast to rise, although to a lesser extent than wheat. Feed consumption of these crops are expected to fall as the Australian livestock industry enters a period of herd rebuilding, and this combined with larger crops is anticipated to boost exports. Wheat exports are forecast to rise to 14.5 MMT in MY 2020/21, from 8.2 MMT in MY 2019/20.

Sorghum production is also forecast to recover in MY 2020/21 from the smallest crop in 50 years in MY 2019/20, rising to 1.4 MMT. For rice, rains in early 2020 have begun to replenish irrigation stores, but they still remain at reduced levels. As a result, although rice production is forecast to increase to 300,000 MT (milled basis), if realized this would still be below long-term average crop size.

Overview of Regional Differences in Wheat Production, Logistics and Use

Australia has great regional differences in terms of wheat supply and use and supply chains with Western/South Australia being a sharp contrast to eastern Australia. The wheat industries in Western Australia and South Australia are almost completely export focused, and typically more than 85 percent of the wheat production in these two states is exported (see table below). This is because there is limited domestic consumption of wheat (such as flour milling and intensive livestock production) in these areas. For example, although these two states account for well over half of wheat production, they also account for just over 10 percent of cattle production. Much of the wheat growing areas in these states are close to export ports, and the infrastructure and supply chains in these states are directed toward exports. In fact, six of the seven largest wheat export ports in terms of volume shipped are located in these two states (see map at the end of this section). In addition, in South Australia especially export infrastructure continues to expand, such as new facility on the Eyre Peninsula which is about to come online and will be used to transship grain into large vessels for export. Finally, because of the strong export focus and low storage prices from the major bulk handlers, there has not been extensive expansion of on-farm storage in these two states.

Eastern wheat growing regions such as New South Wales and Queensland, however, are much more domestically focused. Only about one-third of the wheat grown in these states is exported (and during the drought exports have been nearly non-existent), and there is much greater domestic grain use. These states account for the majority of feed lots in Australia, and much of the wheat milling is located here. As a result, there are no ports in these two states among the top wheat export ports in Australia. Also, because of the robust domestic demand here and more marketing options, there has been a very strong increase in the construction of on-farm storage, and total storage (bulk and on-farm) in these regions now greatly exceeds typical harvest volumes. Industry expectations are that the strong domestic demand

for wheat in eastern Australia, especially from the livestock industries, will continue in the long-term and so any future expansion in wheat exports from Australia will likely need to come from Western and South Australia.

Victoria is the other major wheat producing state and is a mix of these two regions, with some milling and wheat feed consumption, but also strong exports. Typically about half of wheat in Victoria is exported.

Australian Wheat Exports by Port, (2015-2019 avg % of total)



Source: FAS/Canberra using data from the Australian Bureau of Statistics and base map from https://d-maps.com/carte.php?num_car=247255

Australian Wheat Use by State, Thousand metric tons

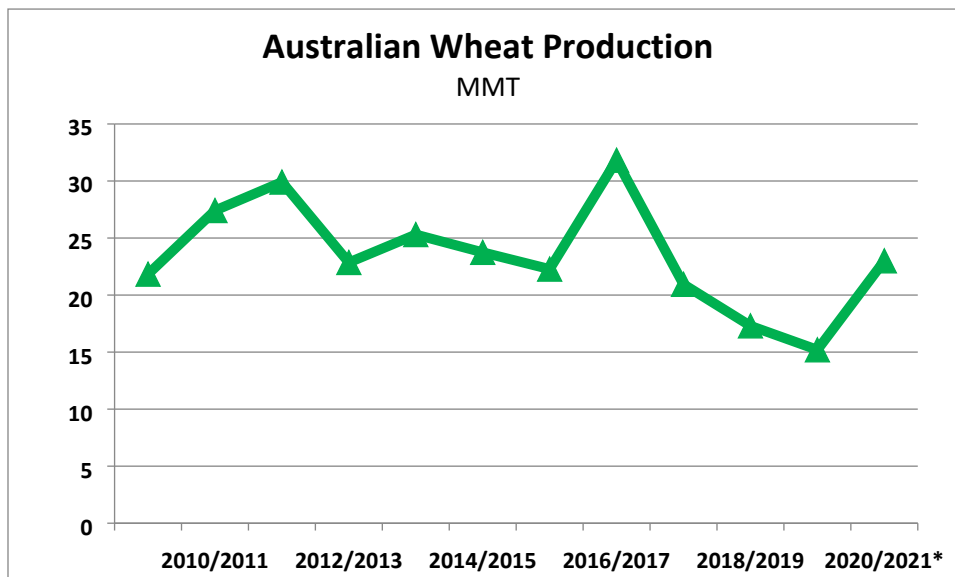
State	5 yr avg production 2014-2019	5 yr avg exports - 2014-2019	% of production exported
Western Australia	8,966	8,007	88%
South Australia	4,283	3,616	84%
Victoria	2,949	1,589	53%
New South Wales	5,975	1,904	31%
Queensland	994	364	36%

Source: Production Data – ABARES, Export Data – Australian Bureau of Statistics
(does not account for amounts shipped between states)

WHEAT

Production

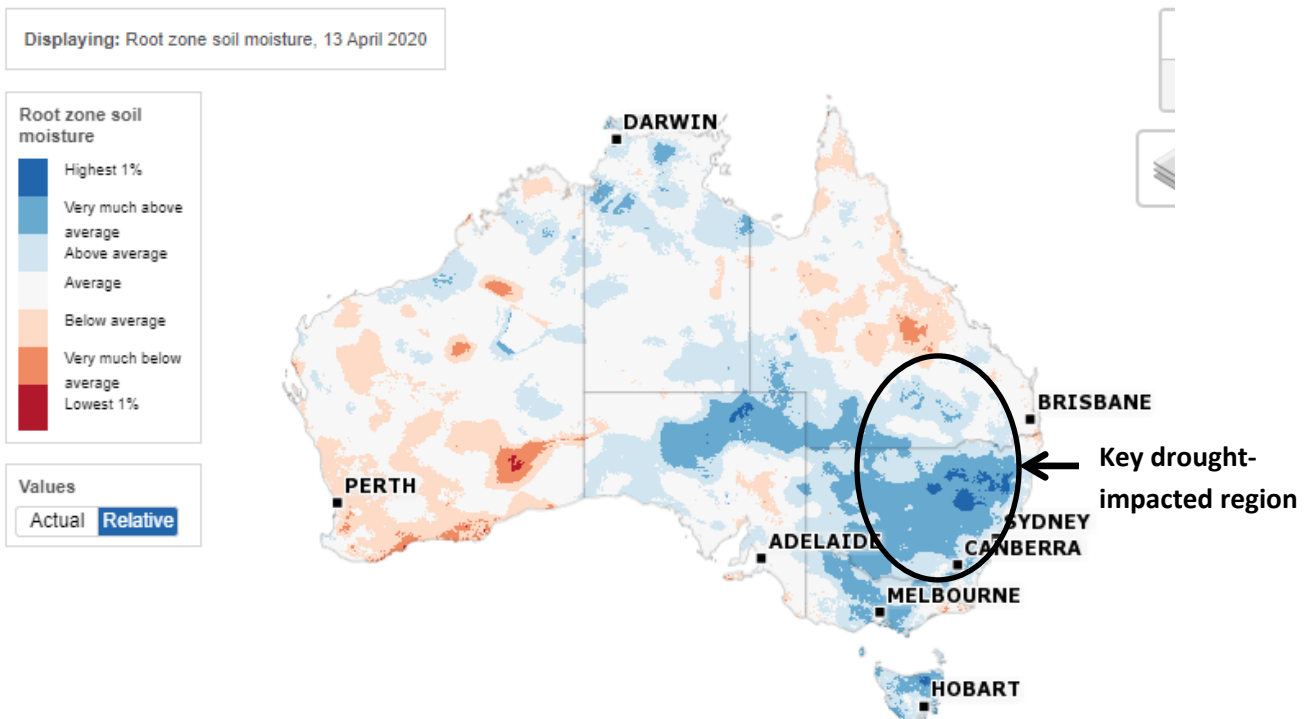
MY 2020/21 wheat production is forecast to rebound after two years of drought-impacted crops and rise to 23 MMT, which if realized would more than an 50 percent increase from MY 2019/20 (15.2 MMT). The reasons for this increase are higher expected area as well as improvement in yields.



Source: FAS/PSD online, * FAS/Canberra forecast

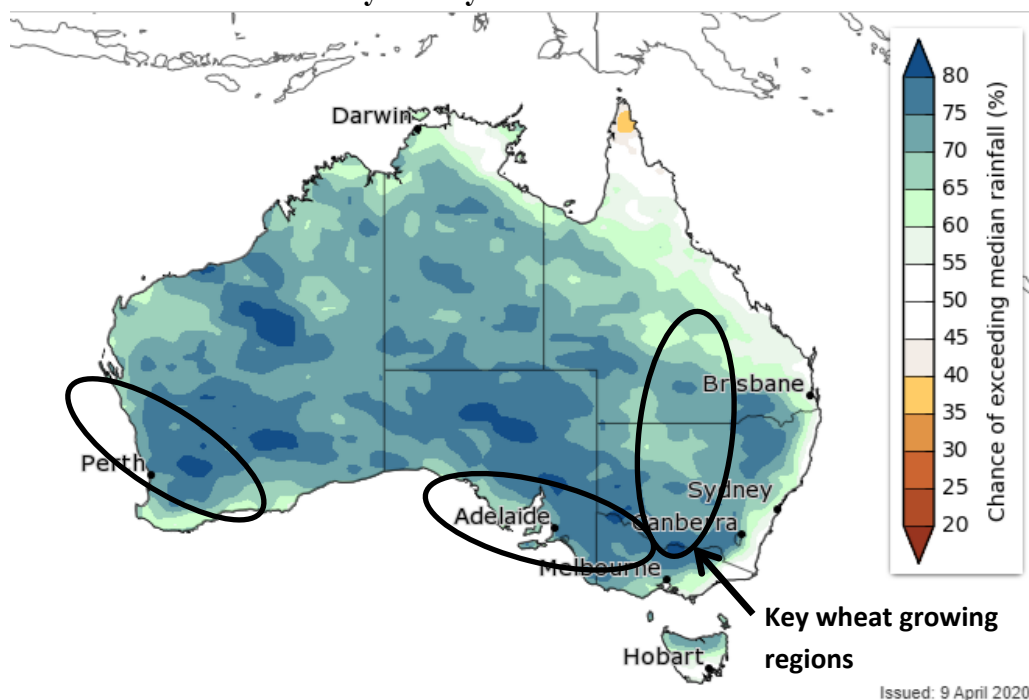
Area harvested is forecast to expand to 12.1 million hectares in MY 2020/21, from 10.1 million in MY 2019/20. Area expansion is expected to be greatest in the states that had been most impacted by drought, especially New South Wales. New South Wales is typically the second largest wheat producing state, but area was sharply reduced there the last two years as the drought resulted in a lack of soil moisture for planting wheat. In addition, because of the combination of low expected yields and strong hay prices, there was even some wheat that did not get harvested for grain and was cut for hay. These areas, however, have received strong rainfall amounts in early 2020, boosting soil moisture levels in time for fall planting (wheat planting is expected to begin in late-April). The moisture maps below show the ample soil moisture currently in these growing regions. In addition, last year a greater portion of winter grain plantings were barley, as some farmers that were waiting for good rains to plant wheat ended up sowing barley due to the shorter growing season. A return to more typical wheat/barley split would also boost wheat area. The outbreak of COVID-19 is not expected to have a major impact on fall grain sowing, although the weakening of the Australian dollar has increased the price of some inputs. Wheat planting typically takes place between April and June, with harvest typically between November and January.

Soil Moisture Levels



Source: Bureau of Meteorology

May to July Rainfall Forecast



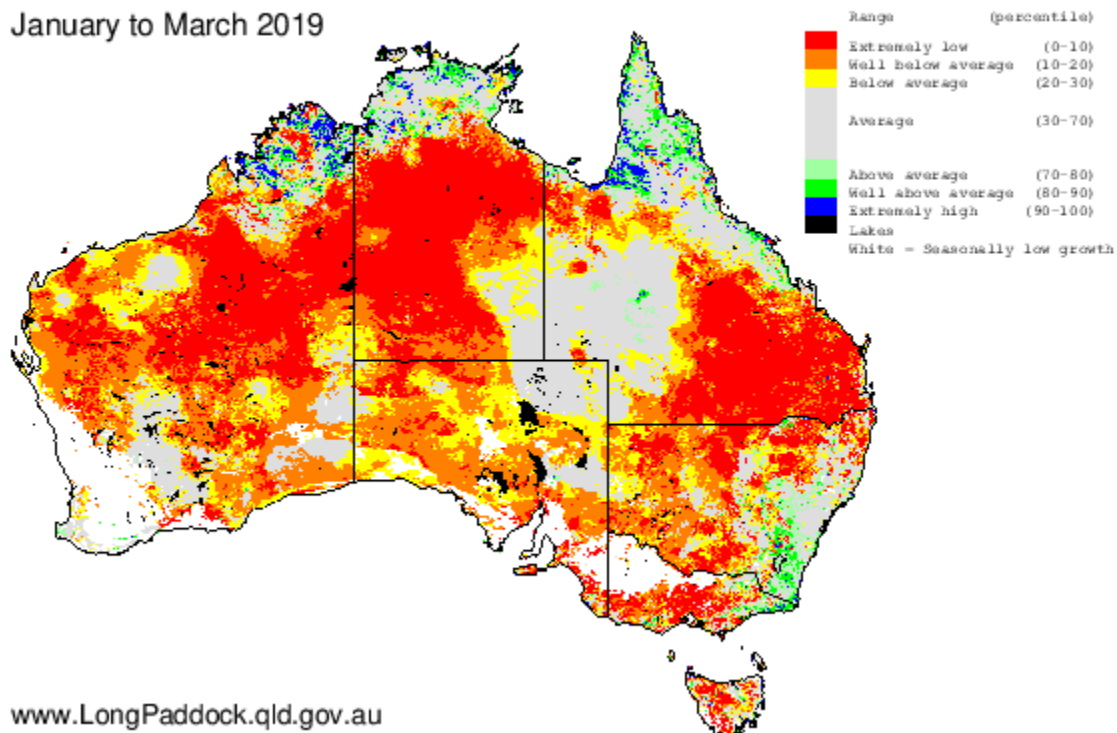
Source: Bureau of Meteorology

Wheat yields in Australia are also forecast to recover, assuming normal weather during the growing season. Yields in New South Wales the past two seasons were only half of average levels, and a return to more normal precipitation would boost those yields. Yields in Western Australia (the largest wheat producing state) last year were also below average due to dryness and frost events. The Bureau of Meteorology forecasts above-average rainfall throughout most of Australia during May-July (see map above). Spring rains, however, will still likely be the largest overall factor in determining the size of the MY 2020/21 crop.

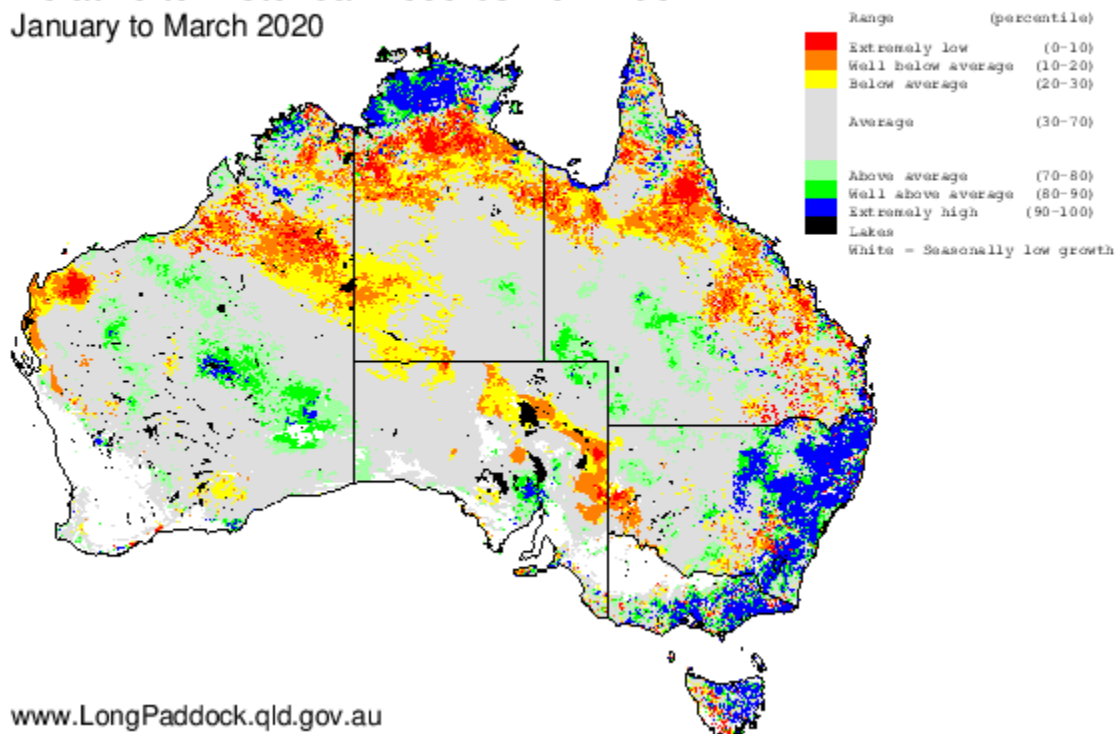
Consumption

Australian consumption of wheat is forecast to fall in MY 2020/21, primarily as a result of less expected feed use. The multi-year drought had a major impact on the livestock industries as the lack of pasture boosted feeding of grain both on-farm, and a sharp expansion in the number of animals at feedlots. Cattle at feedlots reached a record level at the end of 2019. However, with plentiful rains in early 2020 this has boosted farmer confidence in pasture growth, and the livestock industry has begun a period of herd rebuilding. The charts below show the greatly improved pasture situation in many parts of Australia in January-March 2020 compared to the same period in 2019. This herd rebuilding is causing a fall in the number of animals at feedlots, as well as less need for on-farm feeding of grain. This is expected to result in lower levels of wheat for feeding both in MY 2019/20 and MY 2020/21. Although in the short-term there is expected to be a drop in wheat feed use, the long-term trend is for growth as Australian beef exports are increasingly “grain-fed” or “grain-finished”.

Pasture Growth Percentile Relative to Historical Records from 1957 January to March 2019



Pasture Growth Percentile Relative to Historical Records from 1957 January to March 2020



Consumption of wheat for flour is expected to remain steady and has typically only been increasing with population growth. Recently, the impact of COVID-19 has caused a ramp up in flour milling in the short-term in Australia as mills boosted production to provide flour for consumers that are stocking up on supplies. However, this is expected to only have a short-term impact.

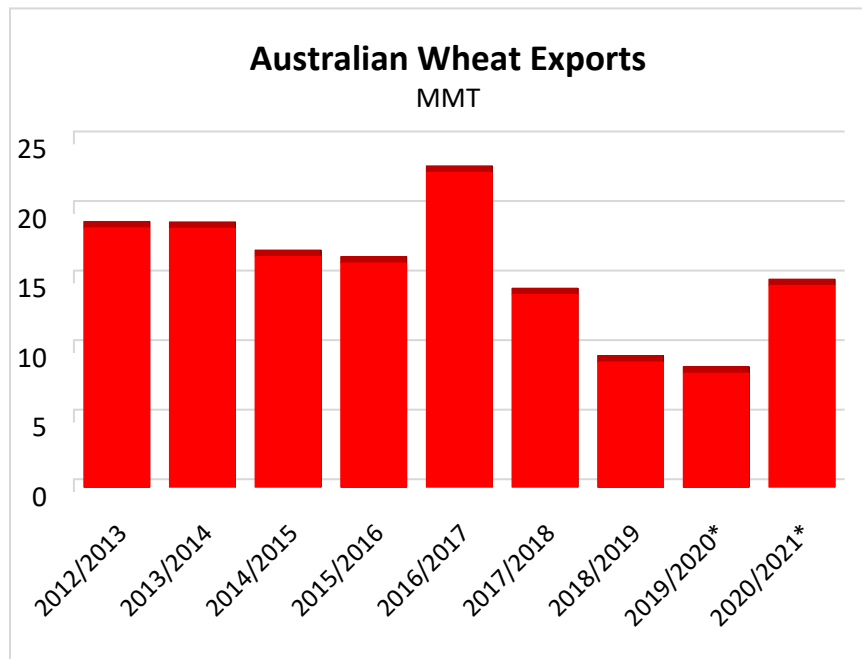
Trade

Imports

With the expectation of a return to more normal wheat production, imports are forecast to drop in MY 2020/21 to 150,000 MT (from 550,000 MT in MY 2019/20). These imports would consist of small amounts of flour and pasta/noodle products, as wheat grain imports are expected to return to zero. Regular import shipments of Canadian wheat for an Australian starch mill began in June 2019.

Exports

Following three straight years of falling exports, Australian wheat exports in MY 2020/21 are forecast to rebound to 14.5 MMT, from only 8.2 MMT in MY 2019/20. The higher production coupled with reduced feed demand would allow for greater export availability, and Australian wheat is expected to return in greater quantities to some key Southeast Asian markets. Exports are also likely to be supported by a continued weak Australian dollar compared to the U.S. dollar. Australia is typically between the fourth and sixth largest wheat exporter in the world.



Source: FAS/PSD online, * FAS/Canberra estimates and forecast

MY 2019/20 exports are estimated at 8.2 MMT. Despite the smaller crop, exports during the first five months of the marketing year (October-February) have been significantly stronger than last year, with

4.2 MMT shipped compared to 3.1 MMT during this same period. Most of this increase is due to larger shipments to China, as well as much higher exports to the Philippines, primarily for feed. Despite the recent strong monthly exports, rising Australian wheat prices and shrinking stocks are expected to result in a sharp decline of exports for the remainder of MY 2019/20.

As part of the recently ratified Australia-Indonesia FTA, there is guaranteed access into the Indonesian market for 500,000 MT of feed grains (including wheat, barley, and sorghum), with this quota amount increasing at five percent each year. Indonesia is typically the largest market for Australian wheat, but during the past two seasons, low Australian wheat supply and strong competition from other suppliers have caused Australian exports there to drop.

Stocks

Australian ending stocks are forecast to increase in MY 2020/21 as a result of larger supply, but still remain relatively tight. MY 2019/20 ending stocks are estimated to be at the lowest levels in more than a decade.

As mentioned, on-farm storage has expanded greatly in eastern Australia as a result of greater domestic use in this region, and desire by farmers to have greater choice over when and where they market their grain. In South and Western Australia, however, on-farm storage remains relatively small. The vast majority of grain there is destined for export and carrying costs by the bulk handlers are generally low.

As a result of food security concerns in light of COVID-19 and to provide transparency in terms of the grain supply situation, two of the major grain handling companies which cover the lion's share of handling and storage in Western Australia and South Australia began to publicly release monthly stock figures.

Wheat Market Begin Year Australia	2018/2019		2019/2020		2020/2021	
	Oct 2018		Oct 2019		Oct 2020	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	10159	10159	10100	10100	0	12100
Beginning Stocks	5508	5508	4960	4964	0	3789
Production	17298	17298	15200	15200	0	23000
MY Imports	360	360	550	550	0	150
TY Imports	362	362	550	800	0	150
Total Supply	23166	23166	20710	20714	0	26939
MY Exports	9006	9002	8200	8200	0	14500
TY Exports	9835	9835	8500	8800	0	13500
Feed and Residual	5700	5700	5200	5200	0	4500
FSI Consumption	3500	3500	3500	3525	0	3550
Total Consumption	9200	9200	8700	8725	0	8050
Ending Stocks	4960	4964	3810	3789	0	4389
Total Distribution	23166	23166	20710	20714	0	26939
Yield	1.7027	1.7027	1.505	1.505	0	1.9008
(1000 HA) ,(1000 MT) ,(MT/HA)						

BARLEY

FAS/Canberra forecasts barley production for MY 2020/21 at 9.4 MMT, 600,000 metric tons above MY 2019/20. This increase is much less significant than for wheat for a number of reasons. First, barley area expanded last year and barley took up a larger percentage of the winter grain crop. This is because dry conditions at planting in a number of regions caused farmers to delay wheat plantings hoping for rains and then sowed barley due to the shorter planting window. This is not expected to be the case this year as soil moisture has been good in many wheat regions. Second, although wheat yields were poor last year, barley yields were actually about average for Australia as a whole. This was due to a bumper barley crop in Victoria, and key barley areas in Western Australia having relatively better growing seasons than the wheat areas.

Although more wheat is expected to be planted this year relative to barley as a percentage of total winter grain area, total barley area is still expected to rise slightly (by about 4 percent to 4.1 million hectares) due to a recovery in plantings in drought-impacted regions such as New South Wales. Barley planting typically takes place in May, with harvest typically between October and December.

Barley yields are forecast to also recover, assuming normal weather and a return to more normal yields in Western Australia (which accounts for about 40 percent of total production).

Consumption

As with wheat, barley feed consumption is expected to fall in MY 2020/21 as a result of less livestock feeding in light of significantly better rainfalls and pasture growth. The MY 2019/20 feed consumption estimate is unchanged, and total barley feeding is expected to be slightly higher than the previous year as strong wheat prices have caused the feed industry to switch to more barley use.

Food, seed, and industrial consumption is forecast to remain steady, with malt production also expected to be stable. The majority of malt produced in Australia is exported, with typically around 700,000 MT a year of exports. Southeast Asian markets and South Korea and Japan are the primary destinations. There is a limited amount of barley used in ethanol production in one plant in Australia, although sorghum is the primary feedstock in that facility.

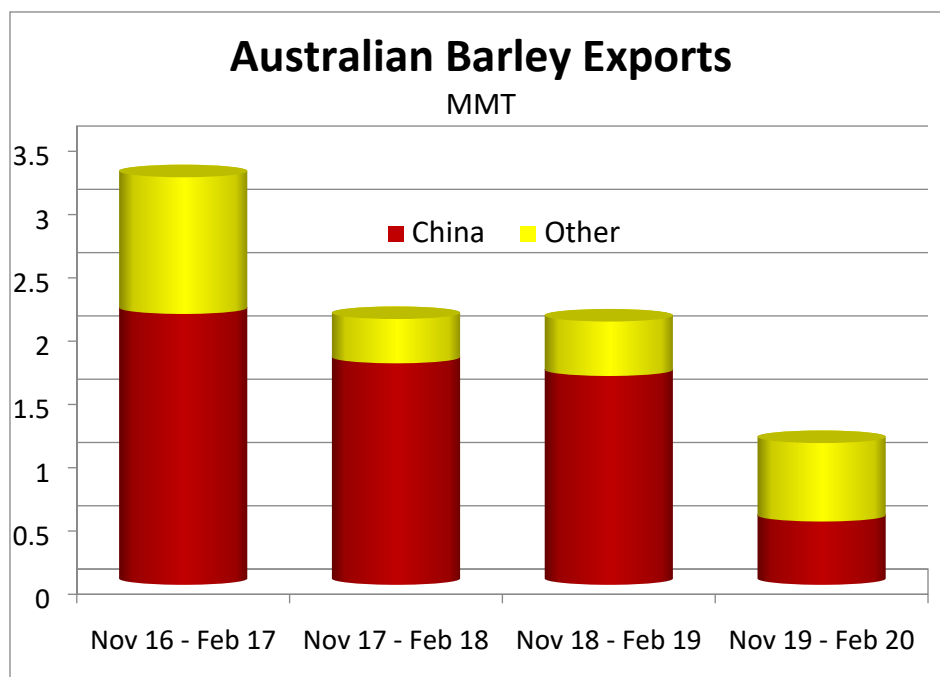
Exports

FAS/Canberra forecasts MY 2020/21 barley exports to rise slightly to 4.5 MMT, from 4.0 MMT in MY 2019/20. This is a result of a larger crop and reduced feed demand as a result of herd rebuilding. Australia is one of the world largest exporters of barley and China is by far the largest market for Australian barley, typically accounting for two-thirds of shipments. Japan is the second largest market.

As opposed to the strong pace of early-season wheat exports, shipments of barley have been considerably slower. For example, from November 2019 to February 2020, shipments only reached 1.1 MMT, compared to 2.1 MMT during the same period the previous year. This has primarily been a result of smaller shipments to China, with only 500,000 MT exported there during this period compared to 1.6

MMT during the same period last year. This slow export pace and relatively sizeable stocks has caused the gap between wheat and barley prices to widen. Although barley exports had started slow, there are reports of strong export selling and the shipment pace is expected to strengthen.

Another factor which will impact barley shipments is the final determination on China’s anti-dumping investigation into imports of Australian barley. On November 14, 2019 China’s commerce ministry announced that the investigation would be extended for another six months. The investigation is now to be finalized by May 19, 2020. This extension continued to create uncertainty for growers and exporters due to China being the primary market.



Source: Australian Bureau of Statistics

Stocks

Barley stocks are forecast to rise in MY 2020/21 as a result of the larger crop. Similar to wheat, there is an increasing amount of on-farm storage in eastern Australia as a result of greater domestic use in these regions. Meanwhile, in Western Australia and South Australia on-farm storage remains low as most of the crop is exported.

Barley	2018/2019	2019/2020	2020/2021
Market Begin Year	Nov 2018	Nov 2019	Nov 2020

Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	3719	3719	3950	3950	0	4100
Beginning Stocks	1776	1776	1899	1899	0	1999
Production	8310	8310	8800	8800	0	9400
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	10086	10086	10699	10699	0	11399
MY Exports	3687	3687	4000	4000	0	4500
TY Exports	3666	3666	4000	4000	0	4500
Feed and Residual	3000	3000	3200	3200	0	2800
FSI Consumption	1500	1500	1500	1500	0	1500
Total Consumption	4500	4500	4700	4700	0	4300
Ending Stocks	1899	1899	1999	1999	0	2599
Total Distribution	10086	10086	10699	10699	0	11399
Yield	2.2345	2.2345	2.2278	2.2278	0	2.2927
(1000 HA) ,(1000 MT) ,(MT/HA)						

SORGHUM

Production

MY 2020/21 sorghum production (to be harvested beginning in March 2021) is forecast to rebound to 1.4 MMT, from the very low level of 350,000 MT in MY 2019/20. With strong rainfalls early in 2020 in sorghum production areas along with prospects for above average rainfall in coming months, there is optimism that the sorghum area should rebound for next year's (MY 2020/21) crop.

The MY 2019/20 production estimate is revised down to 350,000 MT, the lowest level in 50 years. The key sorghum areas of northern New South Wales and southern Queensland had been hit by a multi-year drought, and this resulted in area in MY 2019/20 shrinking drastically. Although the sorghum regions did finally receive plentiful rains in January and February 2020, this was late in the planting window and many growers in this region opted for alternate crops such as corn, millet and mung beans. Only the sorghum growing region in central Queensland which is in a warmer climate and with reduced risks associated with late planting saw much sorghum planting after the January rains.

Consumption

Although total grain feed consumption in Australia is expected to fall next year, sorghum feed use is expected to rise. This is due to the combination of a larger sorghum crop, coupled with sorghum growing areas being near key livestock production areas and feed lots. Sorghum use for ethanol production is also expected to increase slightly due to greater availability. One ethanol facility uses sorghum primarily as the feedstock to produce ethanol, but can also use barley if sorghum is not available.

Exports

Sorghum exports in MY 2020/21 are forecast to rebound as a result of expected higher production. Exports have almost entirely stopped in recent months as stocks have been depleted, and MY 2019/20 exports are estimated to be minimal due to the very small crop. China typically accounts for nearly all of Australia's exports, for use as feed and for making traditional liquor.

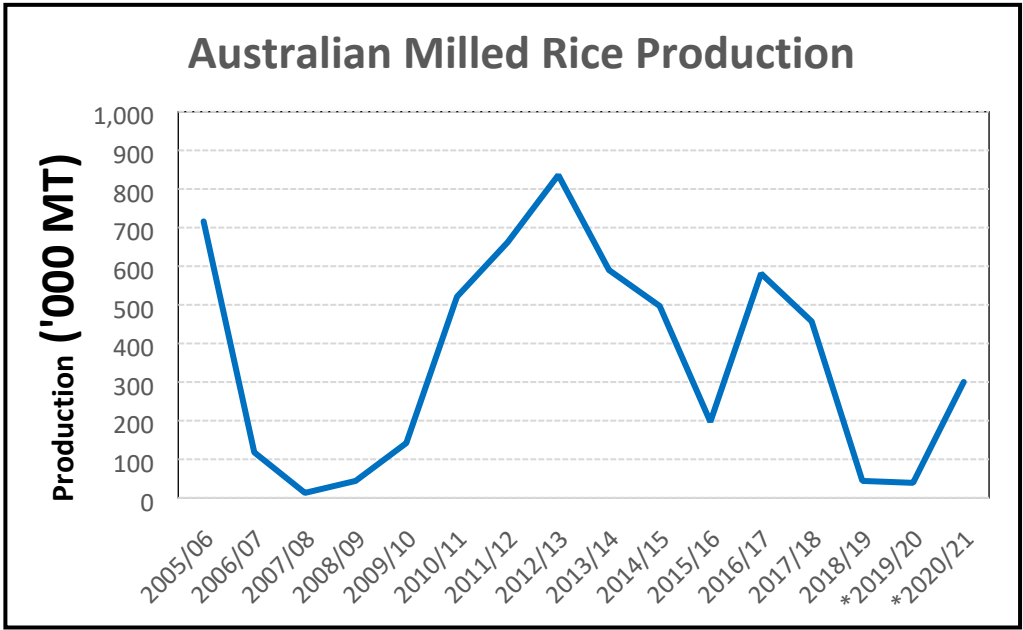
Sorghum Market Begin Year Australia	2018/2019		2019/2020		2020/2021	
	Mar 2019		Mar 2020		Mar 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	496	496	250	175	0	500
Beginning Stocks	273	273	241	305	0	55
Production	1278	1278	400	350	0	1400
MY Imports	0	0	0	0	0	0
TY Imports	0	0	0	0	0	0
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	1551	1551	641	655	0	1455
MY Exports	110	96	40	50	0	500
TY Exports	91	91	40	50	0	500
Feed and Residual	1000	1000	400	450	0	700
FSI Consumption	200	150	100	100	0	125
Total Consumption	1200	1150	500	550	0	825
Ending Stocks	241	305	101	55	0	130
Total Distribution	1551	1551	641	655	0	1455
Yield	2.5766	2.5766	1.6	2	0	2.8
(1000 HA) ,(1000 MT) ,(MT/HA)						

RICE

Production

Milled rice production is forecast to increase to 300,000 MT in MY 2020/21 from an estimated production of only 39,000 MT in MY 2019/20. This increase is a result of a partial replenishment in irrigation water stores, and if realized this amount would be at about 80 percent of the 15-year average. Rice production is highly variable because of the dependence on irrigation.

There are approximately 1,200 rice growers in Australia, and they are primarily concentrated in southern New South Wales along with small quantities grown in northern Victoria and tropical Queensland coastal areas. The region in southern New South Wales is well suited to rice production due to the availability of flat land and clay-based subsoils along with climatic conditions and irrigation water availability. The production in Queensland is primarily dryland variety trials as break crops to sugarcane production and rice milling is very small. Rice planting generally takes place in October, with harvest typically between March and May.



Source: FAS/PSD online *FAS/Canberra estimate & forecast



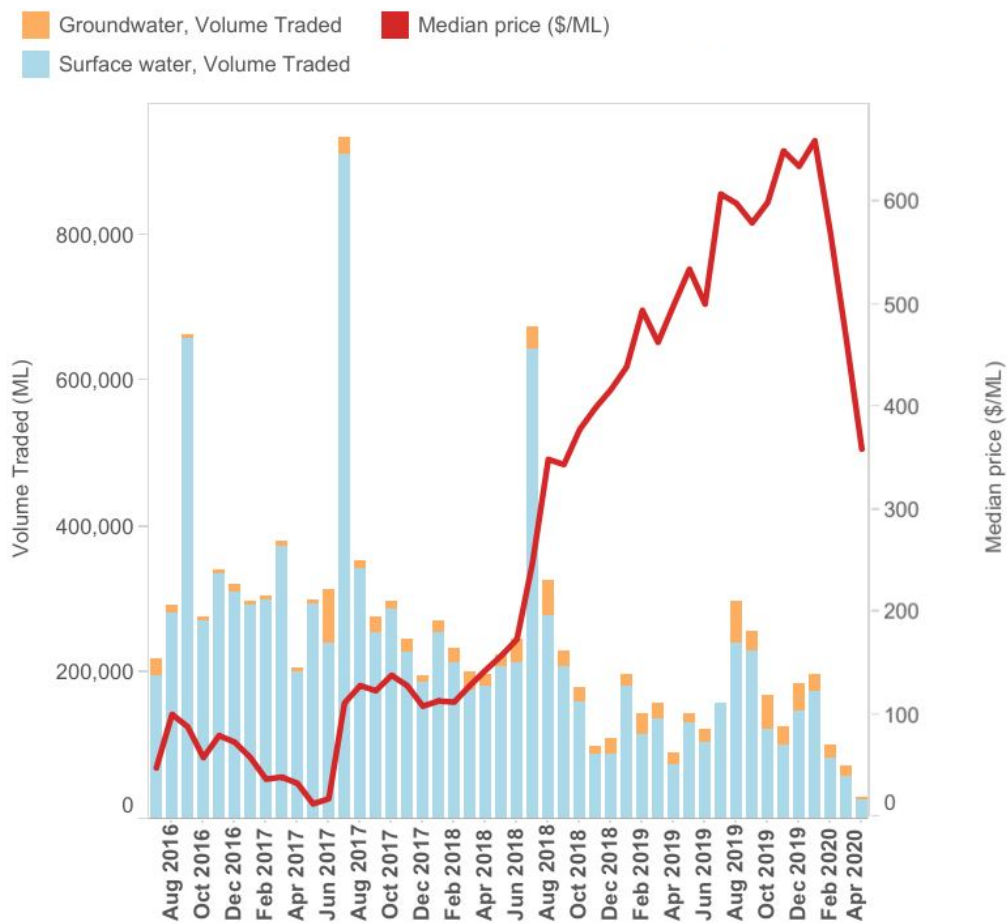
Source: Map from Ricegrowers Association of Australia

Rice production in Australia is highly dependent upon irrigation water availability in the respective water catchments which drives water prices. The MY 2018/19 and MY 2019/20 production seasons were strongly impacted by drought conditions which resulted in low irrigation water availability. This situation drove water prices extremely high on the water exchange markets. The chart below shows the monthly water trade volumes and median prices over the last four years. The MY 2016/17 season was

not affected by drought and the median price ranged from approximately \$25 per megalitre (ML) to \$100/ML across New South Wales. As the drought conditions impacted in through MY 2018/19 and 2019/20 water storages and water availability diminished and drove water prices to levels in excess of \$650/ML.

Rice growers with their own water rights generally determined that it was more profitable for them to sell the low quantities of water that was made available to them on the water exchange market rather than use the water to grow their own rice crop. Industry sources indicate that at water prices in the range of \$200/ML to \$300/ML rice becomes economical to produce. With water prices reaching in excess of \$650/ML during the MY 2019/20 season it is of little surprise that estimated MY 2019/20 rice production is very low.

Allocation trade-volume and price - New South Wales



Source: Bureau of Meteorology

The two key rice producing areas are located in the Murrumbidgee Irrigation scheme and the Murray Irrigation scheme along with a smaller production area in the Coleambally Irrigation scheme (which uses the same water sources as the Murrumbidgee Irrigation scheme).

Although there were plentiful rains in early 2020, and water prices have been falling, water storage levels are still relatively low, limiting expectations for even more expansion in area for MY 2020/21. Water storage levels as of April 2020, 2019 and 2017 for the key rice growing regions of New South Wales are summarised in the table below:

Irrigation Catchment	Capacity (GL)	Storage Levels		Pre Drought
		April 1, 2020	April 2019	April 2017
Murrumbidgee	2,659	41%	28%	64%
Murray	6,861	32%	43%	74%

Source: WaterNSW, Goulburn Murray Irrigation

Water catchments levels are currently low and somewhat in line with the same time in 2019 which was also influenced by drought conditions. These levels are significantly lower compared to pre-drought levels at the same time in 2017 as highlighted in the table above. These catchments are primarily dependent on rainfall during the winter and spring months. Decision making in terms of rice planting area occurs once there is a degree of certainty in terms of irrigation water availability after winter/spring rainfalls influence water catchment levels.

The Bureau of Meteorology forecast for the May to July period is for a likelihood of above average rainfall across much of the country including the rice growing areas and their associated irrigation catchments. The improved conditions since January 2020 and forecast above average rainfalls in May to July has resulted in a degree of optimism that there will be increased water availability in the MY 2020/21 season and reduced water prices. This is expected to drive increased rice planting area, and if rainfall and water inflows into the catchments are above expectations the planting area could increase beyond the current forecast.

Consumption

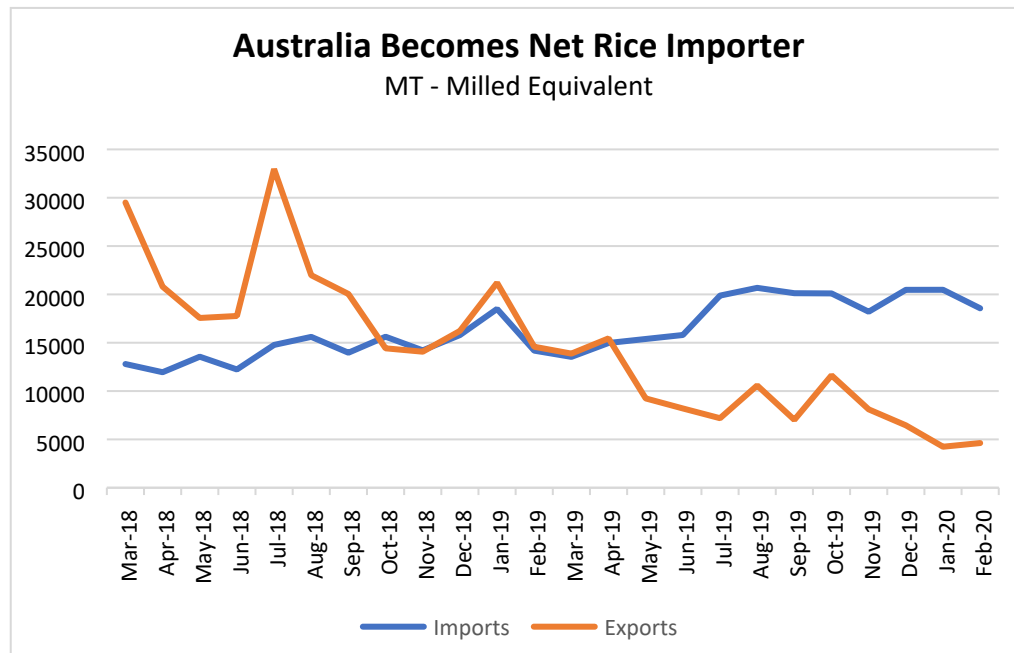
Forecast consumption in MY 2020/21 is anticipated to increase moderately to 330,000 MT from the MY 2019/20 estimate of 320,000 MT. Domestic consumption had fallen because of smaller domestic supply, but in general rice consumption per capita in Australia is relatively stable.

The impact of COVID 19 is expected to boost short-term domestic demand due to consumers stocking up. Stocks of rice at retail stores are currently very low which is due to the lack of available domestic supply and a longer lead time is required to respond to demand via increased imports. However, this is not expected to result in long-term demand changes.

Trade

Imports are forecast to decline in MY 2020/21 to 200,000 MT (from 300,000 in MY 2019/20) as an increase in domestic production would necessitate fewer imports. Thailand and India are the two largest rice suppliers to Australia. The increased production would also allow greater Australian exports, and these are forecast to reach 150,000 MT in MY 2020/21, from a low of only 25,000 MT in MY 2019/20. The Government of Australia does not release rice export data by destination.

The monthly trend in rice imports and exports over the MY 2018/19 and MY 2019/20 drought-affected seasons highlights that Australia transitioned from being a net exporter to a net importer. Australia is forecast to remain a net importer in MY 2020/21, although as mentioned continued strong rainfall could boost production prospects and change the outlook.



Source: Australian Bureau of Statistics

New South Wales, which produces the majority of all rice produced in Australia, has a rice marketing board which issues domestic marketing licenses and grants the sole exclusive export license. This is the only remaining industry in Australia with a single desk export marketing structure.

Stocks

With higher production, ending stocks in MY 2020/21 are forecast to rebuild slightly. Due to two consecutive years of very small domestic production, MY 2019/20 ending stocks are expected to be nearly completely depleted.

Rice, Milled Market Begin Year Australia	2018/2019		2019/2020		2020/2021	
	Mar 2019		Mar 2020		Mar 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	5	5	5	5	0	40
Beginning Stocks	217	217	41	33	0	27
Milled Production	44	44	39	39	0	300
Rough Production	61	61	54	54	0	417
Milling Rate (.9999)	7200	7200	7200	7200	0	7200
MY Imports	230	219	300	300	0	200
TY Imports	212	212	260	260	0	200
TY Imp. from U.S.	10	10	0	0	0	0
Total Supply	491	480	380	372	0	527
MY Exports	110	107	25	25	0	150
TY Exports	134	134	30	30	0	150
Consumption and Residual	340	340	320	320	0	330
Ending Stocks	41	33	35	27	0	47
Total Distribution	491	480	380	372	0	527
Yield (Rough)	12.2	12.2	10.8	10.8	0	10.425
(1000 HA) ,(1000 MT) ,(MT/HA)						

Attachments:

No Attachments