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## **Report Name:** Grain and Feed Update

**Country:** Australia

**Post:** Canberra

**Report Category:** Grain and Feed

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### **Report Highlights:**

Australia is on the path to a third consecutive bumper grain crop in marketing year (MY) 2022/23 after a record setting winter crop and strong summer crop production in MY 2021/22. After another strong start to the planting season followed up by great rainfalls, there is ample moisture to carry the wheat and barley crops through the grain fill stage. The key risk is rainfall at harvest causing grain quality downgrades. Wheat production is forecast at 34 million metric tons (MMT), down from the record-breaking MY 2021/22 crop of 36.3 MMT but still the second largest in history. Similarly, barley production is forecast at 12.2 MMT, down from the previous year's 13.9 MMT record. Sorghum production is forecast to achieve the fourth largest on record in MY 2022/23 at 2.6 MMT and exports at a near record 2.1 MMT. With plentiful irrigation water available, rice production in MY 2022/23 is forecast to continue to grow for the third successive year to 575,000 MT.

## **EXECUTIVE SUMMARY**

Australia is set for a third consecutive bumper grain crop in MY 2022/23. After another strong start to the planting season followed up by great rainfalls, particularly in the eastern states of Australia, there is ample moisture to carry the wheat and barley crops through the grain fill stage. With above-average rainfalls forecast over the coming months, the key risk would be rainfall at harvest causing grain quality downgrades.

Wheat production is forecast at 34 million metric tons (MMT), down from the record-breaking MY 2021/22 crop of 36.3 MMT. Barley production is forecast at 12.2 MMT, down from the previous year's 13.9 MMT record production. If these forecasts are achieved, for wheat it would be the second largest and for barley the fourth largest crops on record. Wheat exports in MY 2022/23 are forecast to reach 26 MMT which would be the second highest on record after an estimated 28 MMT for MY 2021/22. Barley exports are forecast at 6.5 MMT for MY 2022/23 which would be the fourth largest on record.

Sorghum production in MY 2022/23 is forecast for another big year. Soil moisture in all of the sorghum-producing areas is above average at the start of planting in October 2022 and above-average rains are forecast in the coming months. With ample soil moisture for planting, and if the forecast rains in the coming months are realized, the crop will be well on its way to the fourth largest on record at 2.6 MMT. Sorghum exports are forecast at 2.1 MMT for MY 2022/23, in line with the record estimate for MY 2021/22.

For rice, irrigation water storages have been at or near capacity since early 2022 providing growers with confidence that there will be ample water availability for the forecast crop, with planting commencing around October 2022. With this confidence, expectations are that rice growers will increase their planted area and drive further growth in production to 575,000 metric tons (MT) in MY 2022/23, from an estimated 498,000 MT in the prior year. Imports of rice are forecast to decline to 170,000 MT, at around the typical pre-drought levels, and exports are forecast to increase to 280,000 MT, the highest since MY 2014/15.

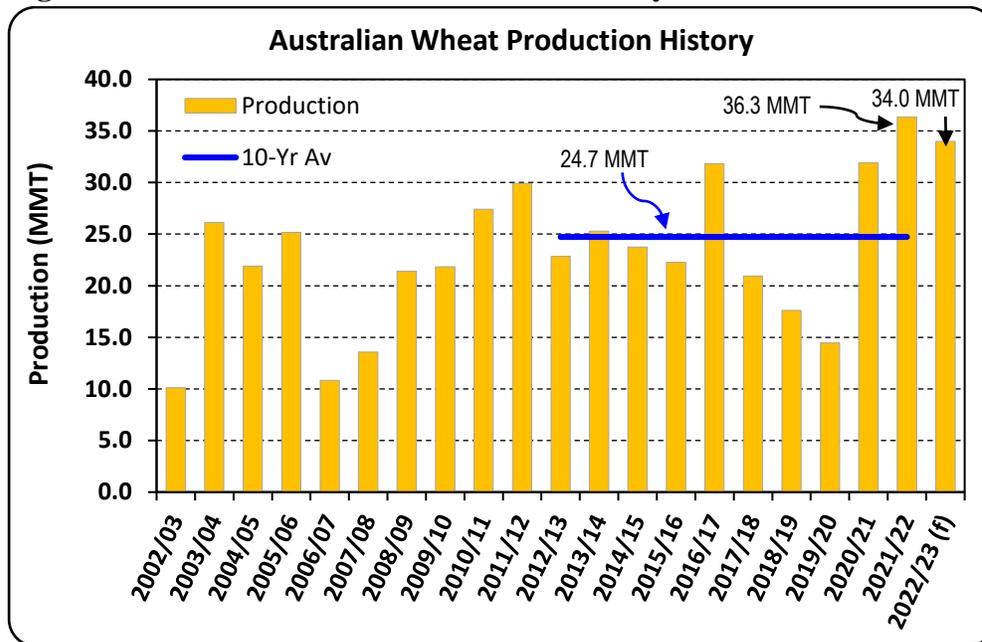
## **WHEAT**

### **Production**

FAS/Canberra forecasts Australia's MY 2022/23 wheat production at 34 MMT after a very good planting period and subsequent above-average in-crop rainfalls across most production regions. This forecast is 38 percent higher than the previous 10-year average and 1 MMT higher than the official USDA forecast. If realized, this would still be 2.3 MMT lower than the record-breaking MY 2021/22 wheat crop but the second highest on record for Australia (see Figure 1). The eastern states have had above-average rainfall to date and the forecast is for above-average rains in the coming months, which will provide ample soil moisture for grain fill and support a strong overall national wheat crop. The wheat harvest in Queensland has already begun and will progress south in the coming months. The key

concern in the eastern states is the risk of rain during harvest resulting in downgraded grain quality. Western Australia has had a very good production season to date, not too dissimilar to last season's record-breaking crop. However, with the forecast of average rains in the lead up to harvest there is elevated risk of periods of heat which could hinder grain fill and not be as optimal as conditions experienced for the record-breaking MY 2021/22 season.

**Figure 1 – Australian Wheat Production History**

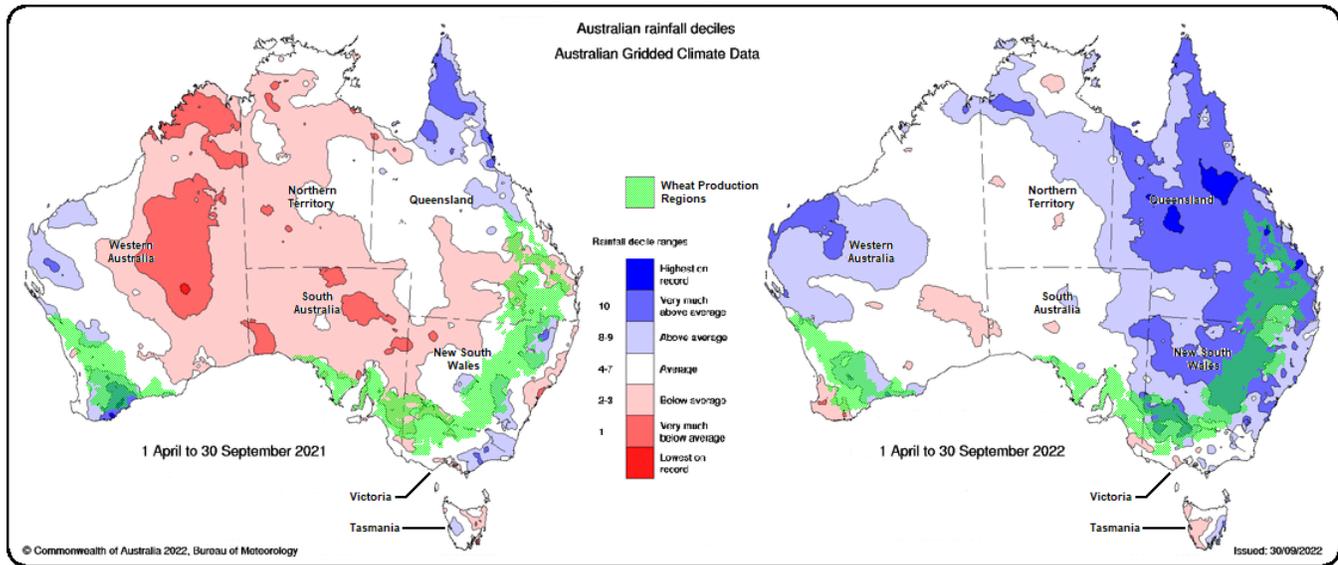


Source: PSD Online / FAS/Canberra

The harvested area is forecast at 13.1 million hectares for MY 2022/23, relative to the 13 million hectares for last year's record-breaking production. Despite increases in crop production input costs for the MY 2022/23 crop, the high world wheat prices have encouraged a slight increase in production area.

For the six-month period to the end of September 2022, the wheat growing areas in the eastern states have generally had well above-average rainfall and significantly better when compared to the same period in the prior year (see Figure 2), which still produced a big crop in these states. For Western Australia rainfall has been around the same at average to above average, except in the south-eastern wheat production area where rainfall has been at or below average and below the same period in 2021. However, this is actually a positive outcome for the south-western corner of Western Australia which has high average rainfall and more typically its winter crops suffer from waterlogging. Western Australia is a major wheat area, generating on average 37 percent of the national production over the last five years. The wheat production outcome in this state has a substantial bearing on Australia's overall production.

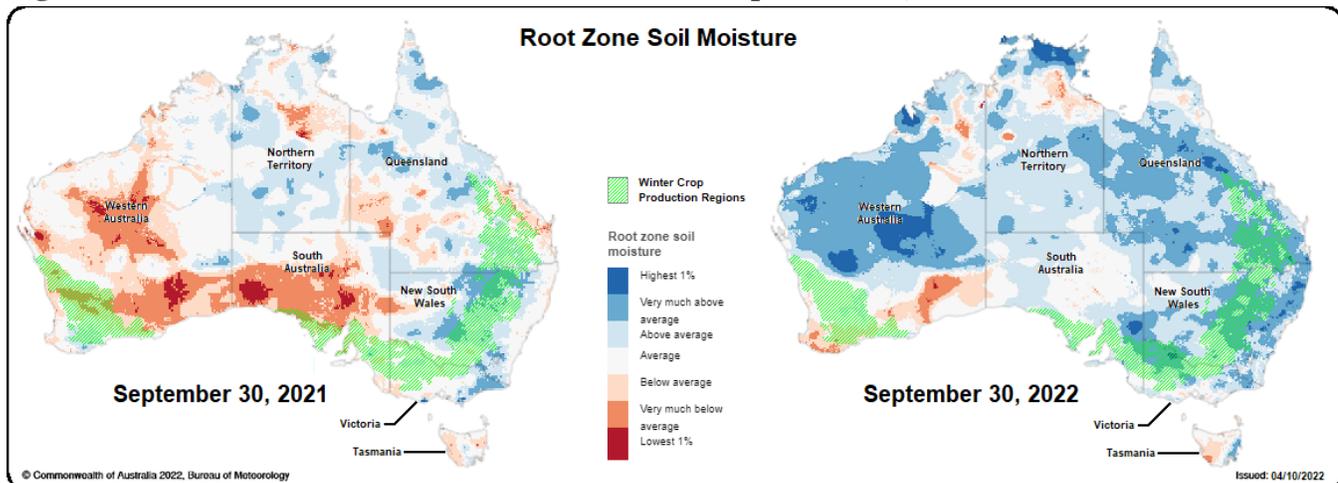
**Figure 2 - Australia Rainfall Deciles – April, 1 to September, 30, 2021 & 2022**



Source: Australian Bureau of Meteorology / FAS/Canberra

The well-above-average rainfall across the April to September 2022 period in the grain growing regions of the eastern states has resulted in very favorable soil moisture as at September 30, 2022 (see Figure 3) and in some patches there have been waterlogging concerns. But overall, the stored soil moisture is ample to achieve good grain fill. In Western Australia soil moisture is generally at average with some parts in the south below average, but overall, in a similar or better position than the same time in 2021.

**Figure 3 - Australia Root Zone Soil Moisture – as at September 30, 2021 & 2022**



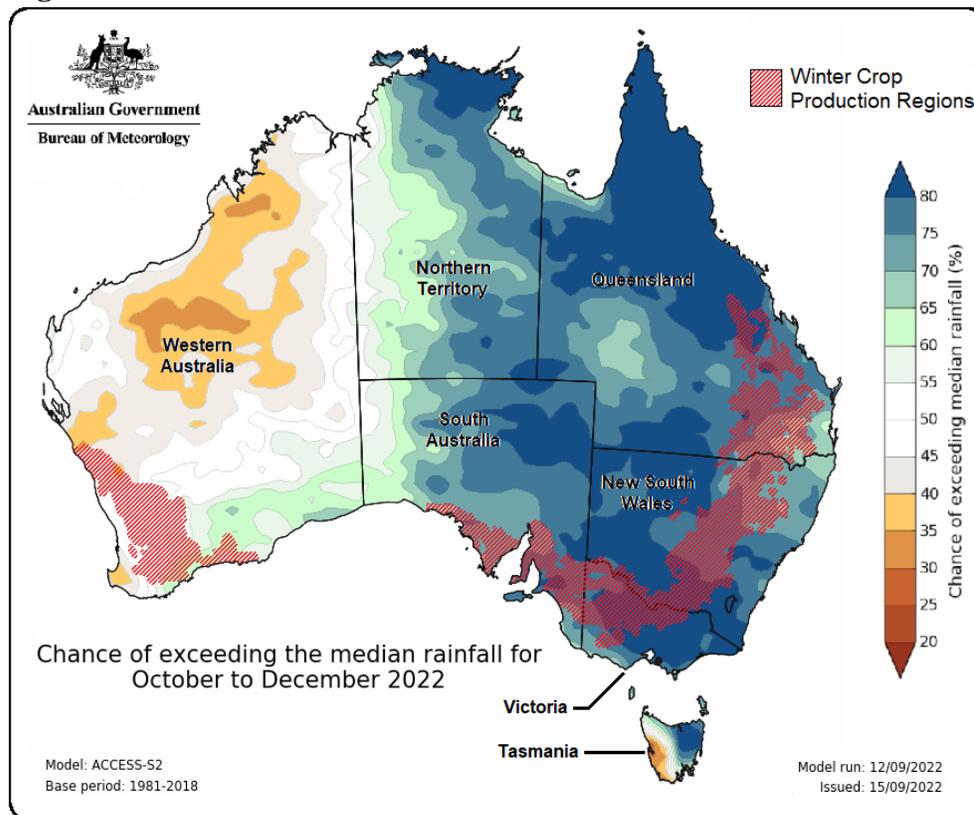
Source: Australian Bureau of Meteorology / FAS/Canberra

The Bureau of Meteorology forecasts for the October to December 2022 period (see Figure 4) indicates expectations of a high chance of exceeding median rainfall in the eastern states and around average in the Western Australia wheat-producing areas. With already strong soil moisture profiles in the eastern

states leading into the grain fill period, rainfall in the coming weeks will not be a crucial factor for yields but rather the bigger concern would be hot weather disruption to the grain fill. As mentioned earlier, the biggest risk for eastern state wheat producers from the forecast is rain at harvest which could have a negative impact on grain quality as did similar circumstances for last year's crop.

For Western Australia, if average rainfall in the coming months is realized, the timing and quantity of those rains in the coming weeks during the grain fill period will strongly determine how good their production result will be. However, the advantage in Western Australia is that if the forecast is realized there is a low risk of rain at harvest causing downgraded wheat quality.

**Figure 4 - Australia Rainfall Forecast – October to December 2022**



Source: Australian Bureau of Meteorology / FAS/Canberra

The wheat production estimate for MY 2021/22 is 36.3 MMT, and in line with the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimate now around nine months after the completion of harvest.

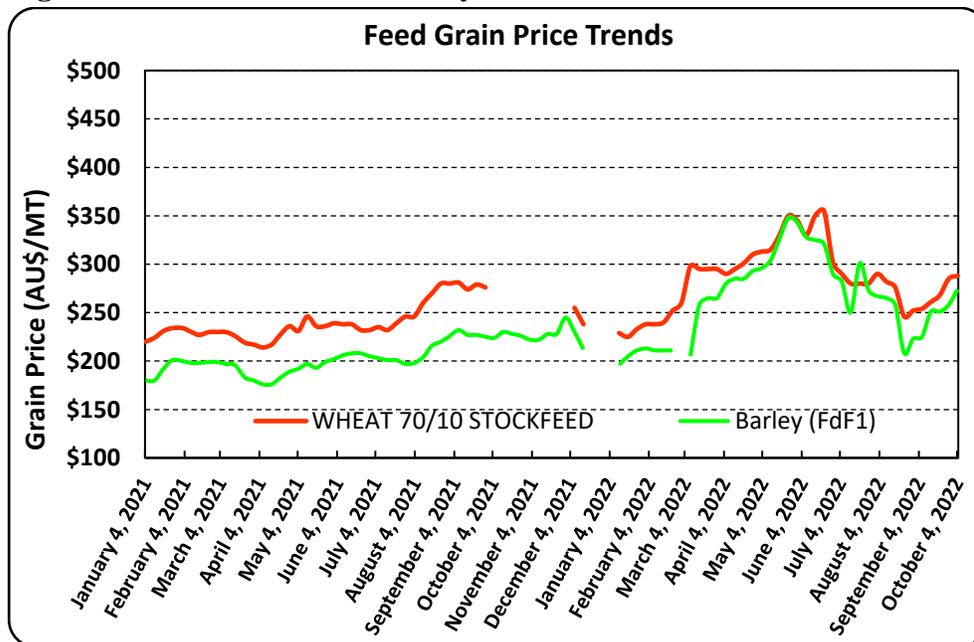
### Consumption

FAS/Canberra forecasts domestic consumption of wheat at 8.5 MMT in MY 2022/23, in line with the official USDA forecast.

The beef cattle industry is a major feed wheat consumer and has broadly been enjoying very good pasture production for almost three years, enabling a herd rebuild which resulted in improvement in feedlot cattle numbers in MY 2021/22. With positive pasture production conditions in 2022 so far, and a positive rainfall forecast in the coming months, strong pasture production is expected to carry through into MY 2022/23. This will encourage continued grassfed cattle production and is expected to limit the growth in feedlot cattle numbers in MY 2022/23. With this, similar feed wheat consumption of 5 MMT is anticipated for the forecast year as estimated for MY 2021/22.

A further important impact on the demand for wheat from the livestock sector has been that across 2022 the price gap between feed wheat and barley has shown a premium of around AU\$20 to AU\$40 (see Figure 5). With ample supply of feed grain in Australia after two big production years and another big year shaping up in MY 2022/23, there is no expectation that there will be any reason for a significant change in the price premium for the preferred feed wheat over barley in the forecast year. With this, it is unlikely that the livestock feed industry will substitute one feed grain over another in the forecast year.

**Figure 5 – Feed Wheat and Barley Price Differential**



Source: *The Land newspaper*

Domestic consumption for flour milling is expected to remain unchanged from recent past years at 3.5 MMT in MY 2022/23. Consumption of wheat for flour has typically only been increasing with population growth which is expected to remain relatively flat in the short term.

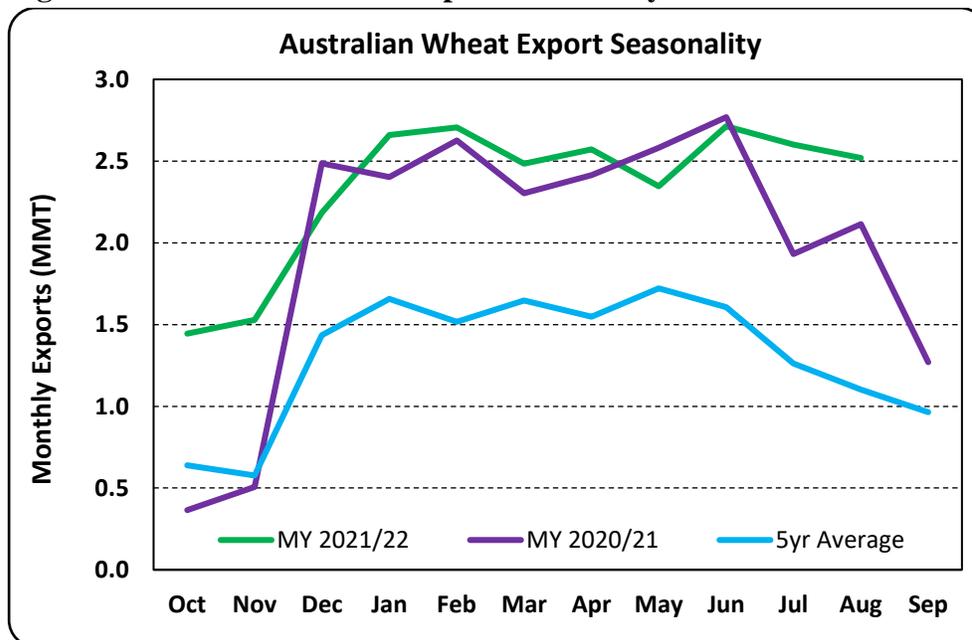
FAS/Canberra’s wheat consumption estimate for MY 2021/22 remains unchanged at 8.5 MMT and is in line with the official USDA estimate.

## Exports

FAS/Canberra forecasts another big year of wheat exports in MY 2022/23 at 26 MMT, down by 2 MMT from the prior year record export estimate of 28 MMT. If the forecast exports are achieved, it would still be the second highest on record.

FAS/Canberra's wheat export estimate for MY 2021/22 is revised up to 28 MMT from the official USDA estimate of 27.5 MMT. If realized this would eclipse the previous record set in MY 2011/12 by 3.3 MMT (14 percent). If not for logistical bottle necks in transporting grains from Western Australian regional receival points to port, the final export result may have reached an even higher level. With only the September 2022 result yet to be determined for MY 2021/22, exports are at 25.8 MMT compared to 22.5 MMT for the same period in the previous year. Wheat exports typically tail off in the July to September period (see Figure 6) in the lead up to the start of the new harvest. However, with record production in MY 2021/22, and strong global demand, exports have remained high over recent months and with ample stocks is expected to result in a strong final export month for MY 2021/22 to achieve the full year estimate.

**Figure 6 – Australian Wheat Export Seasonality**



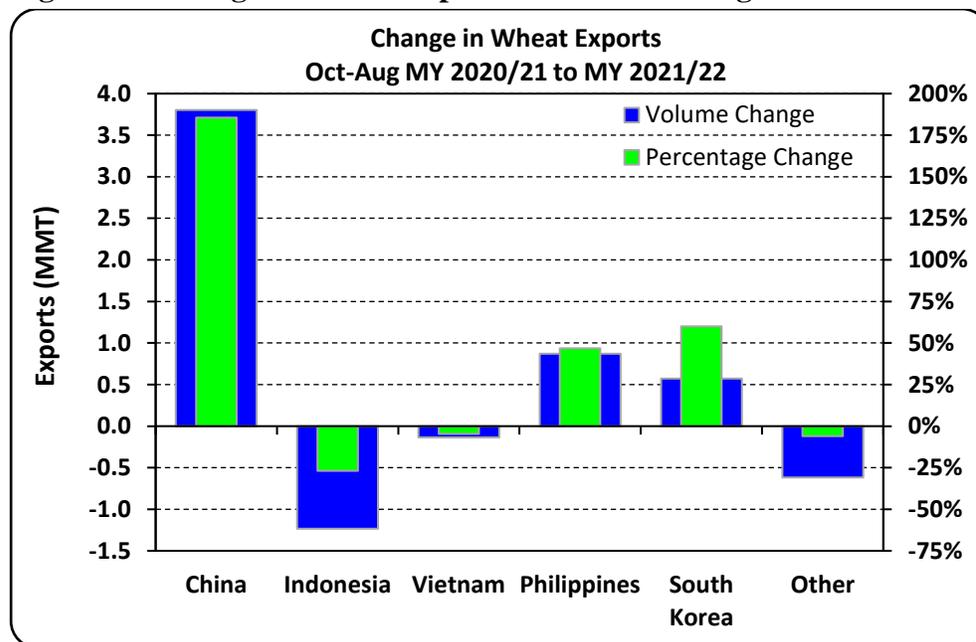
Source: Australian Bureau of Statistics

Australia has for many years had over 50 wheat export destinations and of these there are nine core customers that over the last five years have consistently accounted for 70 to 75 percent of all exports.

During the first 11 months of MY 2021/22, China has increased its import of wheat from Australia by 3.8 MMT, up 185 percent compared to the same period in the previous year (see Figure 7). After a big year in MY 2020/21 where Indonesia was by far the biggest destination for Australian wheat, exports

have reduced by 1.2 MMT (27 percent). Conversely exports to the Philippines and South Korea have increased by 0.87 MMT and 0.57 MMT so far.

**Figure 7 – Change in Wheat Exports – October to Aug 2020/21 to 2021/22**



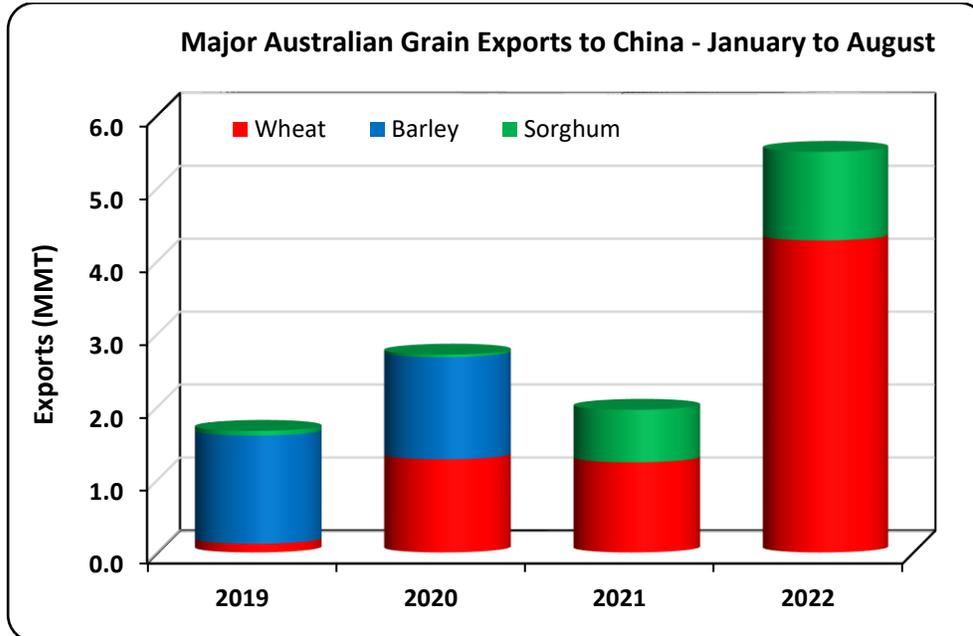
Source: Australian Bureau of Statistics

Notably, there are numerous nations outside of the nine key export destinations who have significantly increased their imports of Australian wheat in MY 2021/22. These include Bangladesh, Sudan, Taiwan, Mozambique and Iraq. This is largely attributed to the shortage of wheat supply from the northern hemisphere.

There has been a substantial shift in the type of grain exported from Australia to China over recent years. Exports of barley to China have ceased after China imposed a prohibitive duty on the import of Australian barley, but the volume of sorghum and in particular wheat exports to China have grown considerably. Overall exports of these major grains for 2022 (January to August) is two to three times higher compared to the same period in the three prior years (see Figure 8).

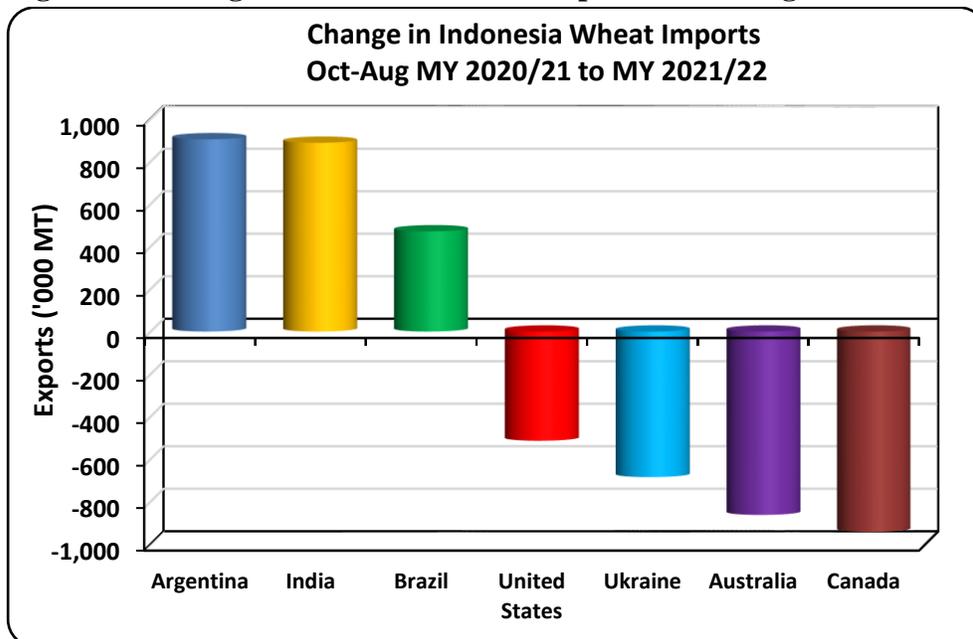
Indonesia is generally a major export destination for Australian wheat, but the volume of exports has decreased by 1.2 MMT for MY 2021/22 (October to August) from the prior year. There has been a substantial shift in the source of Indonesian wheat imports to Argentina, India and Brazil at the expense of the United States, Ukraine (due to unavailability of supply), Australia, and Canada (see Figure 9).

**Figure 8 – Major Australian Grain Exports to China – January to August**



Source: Australian Bureau of Statistics

**Figure 9 – Change in Indonesia Wheat Imports – Oct-Aug MY 2020/21 to MY 2021/22**



Source: Trade Data Monitor – Indonesian import data

## Imports

FAS/Canberra forecast imports of wheat in MY 2022/23 at 200,000 MT, in line with the estimate for MY 2021/22. Imports primarily consist of wheat products and pasta and volumes for this purpose have been relatively stable in Australia.

## Stocks

Australia's ending stocks of wheat in MY 2022/23 are expected to decline slightly after a lower forecast production from the record-breaking MY 2021/22 season. As mentioned previously the limitations in exporting capacity will result in higher stock levels at the end of MY 2021/22 than would otherwise be the case. Although another big production year is forecast, the anticipated export volume will be within Australia's capacity which is expected to result in a small decline in ending stocks in MY 2022/23.

FAS/Canberra's estimate of the MY 2021/22 ending stock of wheat is 3.1 MMT, slightly lower than the official USDA estimate of 3.5 MMT. This relates to FAS/Canberra upward revising export levels by 500,000 MT based on the results to date and expectation of a strong final month of export result.

Wheat Market Year Begins Australia	2020/2021		2021/2022		2022/2023	
	Oct 2020		Oct 2021		Oct 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	12643	12643	13039	13039	13100	13100
Beginning Stocks (1000 MT)	2678	2678	2955	3026	3502	3073
Production (1000 MT)	31923	31923	36347	36347	33000	34000
MY Imports (1000 MT)	200	198	200	200	200	200
TY Imports (1000 MT)	464	464	196	196	200	200
TY Imp. from U.S. (1000 MT)	1	1	1	1	0	0
Total Supply (1000 MT)	34801	34799	39502	39573	36702	37273
MY Exports (1000 MT)	23846	23773	27500	28000	25000	26000
TY Exports (1000 MT)	19720	19720	26113	25958	26000	27000
Feed and Residual (1000 MT)	4500	4500	5000	5000	5000	5000
FSI Consumption (1000 MT)	3500	3500	3500	3500	3550	3500
Total Consumption (1000 MT)	8000	8000	8500	8500	8550	8500
Ending Stocks (1000 MT)	2955	3026	3502	3073	3152	2773
Total Distribution (1000 MT)	34801	34799	39502	39573	36702	37273
Yield (MT/HA)	2.525	2.525	2.7876	2.7876	2.5191	2.5954

(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

TY = Trade Year, which for Wheat begins in July for all countries. TY 2022/2023 = July 2022 - June 2023

## **BARLEY**

### **Production**

FAS/Canberra forecasts Australia's MY 2022/23 barley production at 12.2 MMT, 1.7 MMT below the MY 2021/22 estimate of 13.9 MMT, but unchanged from the USDA official forecast. If the forecast is realized, it would be the fourth highest on record with the MY 2020/21 crop being the highest (14.6 MMT) and the second highest achieved last season (MY 2021/22).

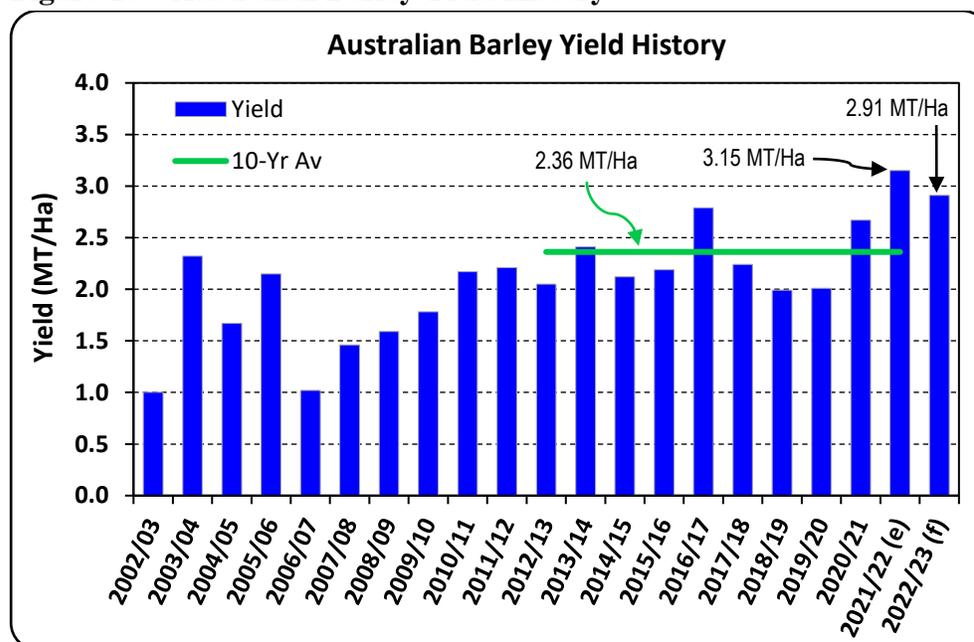
The year-on-year reduction in production is in part due to a forecast decrease in area from 4.42 million hectares to 4.20 million hectares. This is due to the particularly high canola and very strong wheat prices in the lead up to planting resulting in growers substituting some of their typical barley planting area mainly to canola and in smaller part to wheat. Growers had difficulty sourcing canola seed at planting and had it been more available there would have been an even lower barley planted area.

As mentioned earlier for wheat, rainfall and soil moisture conditions have broadly been favorable to date particularly in the eastern states but growers in Western Australia are also well placed (see Figure 3). At this stage with forecasts of well-above-average rainfall in the eastern states and prospects of average rainfall in Western Australia (see Figure 4) in the coming months, there is a strong prospect of a big barley crop particularly from the eastern states.

FAS/Canberra's MY 2022/23 yield forecast of 2.91 MT per hectare is significantly above the 2.36 MT per hectare average over the previous 10-years, but below the 3.15 MT per hectare achieved in the MY 2021/22 record-breaking production year (see Figure 10). The high yields in recent years are mainly associated with particularly good seasonal conditions across most growing regions but also in part due to a shift by farmers from malting barley to higher-yielding feed barley. Many growers will plant malting barley varieties and if seasonal conditions are good and there is not a large price basis between malting grade and feed grade barley on offer, they will increase in-crop nitrogen fertilizer applications and opt to target higher barley yields for feed to improve their crop returns. So good seasonal conditions tend to exacerbate the overall average barley yield achieved.

FAS/Canberra's barley production estimate for MY 2021/22 is 13.9 MMT, and in line with the official USDA estimate. Now around nine months after the completion of harvest, the estimate is in line with the ABARES estimate.

**Figure 10 – Australian Barley Yield History**



Source: PSD Online / FAS/Canberra

### Consumption

FAS/Canberra forecast's MY 2022/23 barley consumption at 6 MMT and in line with the MY 2021/22 estimate but 500,000 MT higher than the official USDA estimate. Domestic consumption for malting purposes is relatively stable with livestock feed consumption being the primary variant from year to year.

Similar to feed wheat, the beef cattle industry is a major feed barley grain consumer. The beef cattle industry has broadly had very good pasture production over the last two years, enabling a herd-rebuild which resulted in improvement in feedlot cattle numbers in MY 2021/22. Based on current conditions and rainfall forecasts in the coming months, strong pasture production is expected to carry through into MY 2022/23. With this, grassfed cattle production is expected to expand as cattle numbers continue to recover from the earlier drought (2017 to 2019), and this is anticipated to limit the growth in feedlot cattle numbers in MY 2022/23. On this basis, a similar feed barley consumption of 4.5 MMT is anticipated for the forecast year as estimated for MY 2021/22.

A smaller component of domestic barley consumption of around 1.5 MMT is mainly for malting. This volume of consumption has remained relatively stable over the recent years.

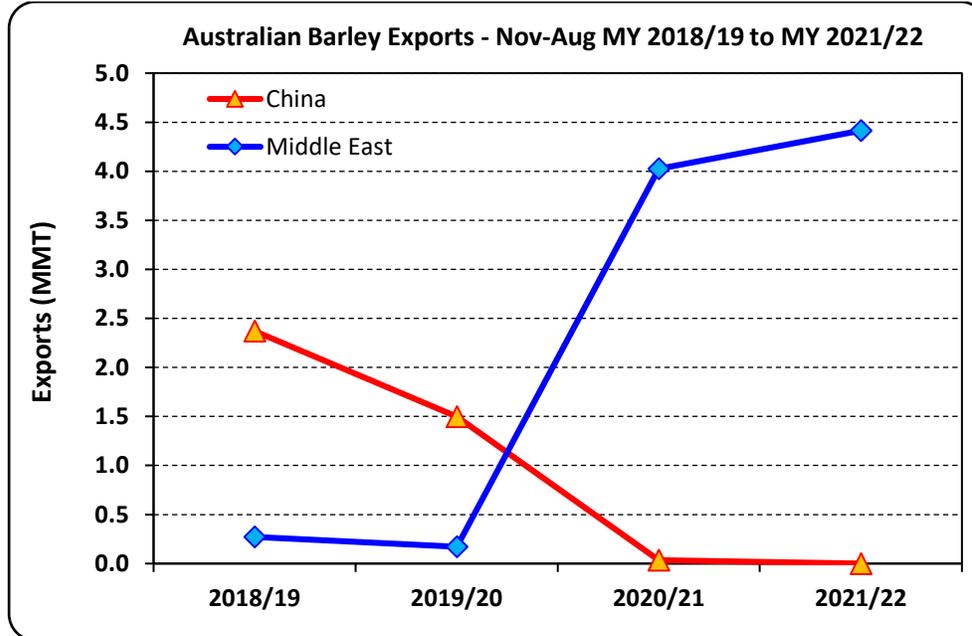
FAS/Canberra's consumption estimate for MY 2021/22 is 6 MMT, 500,000 higher than the official USDA estimate. FAS/Canberra has a higher feed consumption estimate compared to the official USDA estimate.

## Exports

Australia's barley exports for MY 2022/23 are forecast at 6.5 MMT, 200,000 MT below the official USDA forecast and down 1.7 MT from the revised MY 2021/22 estimate of 8.2 MMT. This is largely driven by a 1.7 MMT-forecast reduction in barley production from the MY 2021/22 estimate.

In past years China has been a major importer of barley from Australia, dominating the trade at 60 to 80 percent of overall exports. After China imposed prohibitive duties on Australian barley imports in May 2020 (which diminished the MY 2019/20 outcome), there were concerns as to Australia's capacity to find alternate markets. The Middle East and in particular Saudi Arabia became a major importer of Australian barley in MY 2020/21 (see Figure 13), mainly due to a lack of supply from the northern hemisphere caused by drought. In MY 2021/22 barley exports to the Middle East have increased even further.

**Figure 13 – Australian Barley Exports – Nov to Aug 2018/19 to 2021/22**



Source: Australian Bureau of Statistics

FAS/Canberra's barley export estimate of 8.2 MMT for MY 2021/22 is in line with the official USDA estimate. Barley exports for the first ten months of MY 2021/22 (November 2021 to August 2022) have been very strong, reaching 7.1 MMT, a little below the 7.3 MMT for the same period in the previous year (which achieved a full marketing year result of 8.3 MMT). After accounting for expectations that the tail end of the export season is expected to decrease its pace but remain stronger than usual, barley exports are on track to achieve the 8.2 MMT estimate.

## Stocks

Australia's ending stocks of barley are forecast to decline slightly to around 2.4 MMT in MY 2022/23 but is some 300,000 MT lower than the official USDA forecast. This is mainly due to FAS/Canberra's higher feed grain consumption forecast.

Barley Market Year Begins Australia	2020/2021		2021/2022		2022/2023	
	Nov 2020		Nov 2021		Nov 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	5491	5491	4417	4417	4200	4200
Beginning Stocks (1000 MT)	2711	2711	2518	3029	2724	2735
Production (1000 MT)	14649	14649	13906	13906	12200	12200
MY Imports (1000 MT)	0	0	0	0	0	0
TY Imports (1000 MT)	0	0	0	0	0	0
TY Imp. from U.S. (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	17360	17360	16424	16935	14924	14935
MY Exports (1000 MT)	8342	8331	8200	8200	6700	6500
TY Exports (1000 MT)	8007	8004	8200	8200	6700	6500
Feed and Residual (1000 MT)	5000	4500	4000	4500	4000	4500
FSI Consumption (1000 MT)	1500	1500	1500	1500	1500	1500
Total Consumption (1000 MT)	6500	6000	5500	6000	5500	6000
Ending Stocks (1000 MT)	2518	3029	2724	2735	2724	2435
Total Distribution (1000 MT)	17360	17360	16424	16935	14924	14935
Yield (MT/HA)	2.6678	2.6678	3.1483	3.1483	2.9048	2.9048

(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

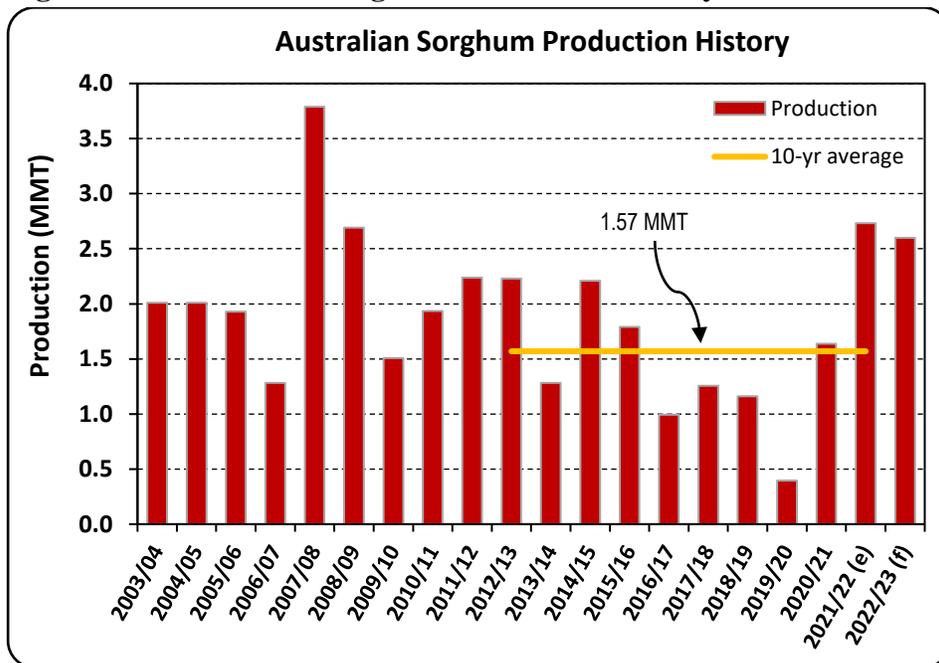
TY = Trade Year, which for Barley begins in October for all countries. TY 2022/2023 = October 2022 - September 2023

## SORGHUM

### Production

The FAS/Canberra sorghum production forecast for MY 2022/23 is 2.6 MMT and in line with the official USDA forecast but well up on earlier forecasts. If realized, it would be the fourth largest crop on record and 66 percent above the previous 10-year average of 1.57 MMT (see Figure 14). The strengthening forecast is after strong winter and spring rains that have set up ample soil moisture reserves at the start of planting in October across all sorghum producing regions. Coupled with above-average rainfall forecast in the coming months and good prices, planting area is forecast to expand by 19 percent to 740,000 hectares in MY 2022/23 from 624,000 hectares in the previous year.

Figure 14 – Australian Sorghum Production History



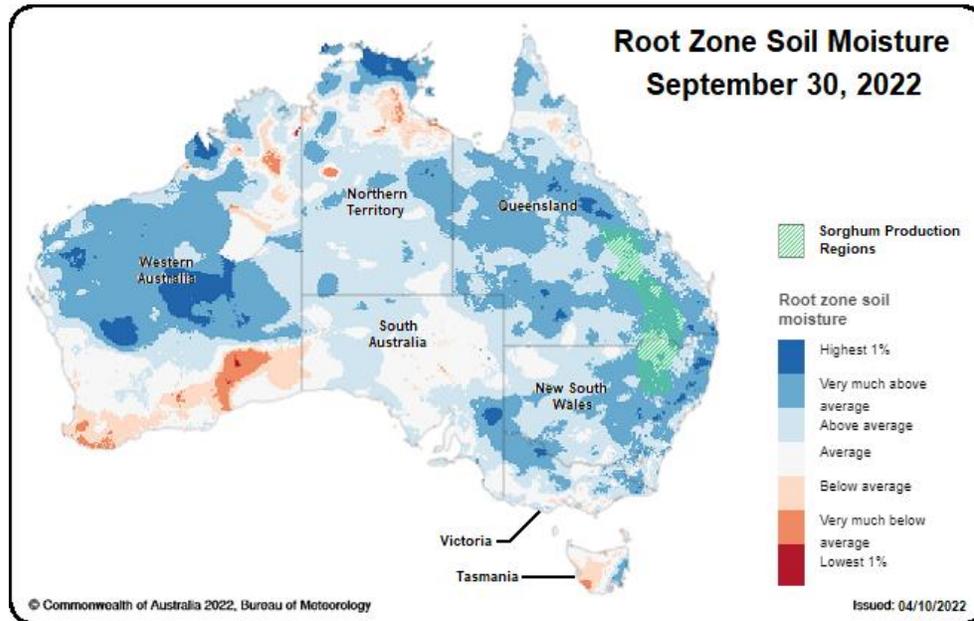
Source: PSD Online / FAS/Canberra

Queensland typically produces over two-thirds of Australia's overall sorghum production, much of which is in southern Queensland. Around one-third of the national sorghum crop is produced in northern New South Wales. In the main producing regions of southern Queensland and northern New South Wales the main planting period is from October to December, with harvest generally between March and June. The northern parts of the sorghum growing regions of central Queensland have a warmer climate which allows a greater planting window, typically from September to as late as February which gives this region a greater capacity to be more opportunistic with their planting program and improving their chances of a successful crop outcome. Sorghum is typically harvested from March to June in the major production regions but for late planted crops in central Queensland harvest can be later.

All sorghum-producing regions have had well-above-average rainfall over the six months in the lead up to the start of planting in October 2022 which has built up well-above-average soil moisture profiles

across all sorghum producing area as at the end of September 2022 (see Figure 15). This has provided sorghum producers with confidence to plan their sorghum plantings well in advance of the start of planting and according to industry sources has encouraged a significant increase in the intended planned sorghum area from the previous year.

**Figure 15 – Root Zone Soil Moisture – as at September 30, 2022**

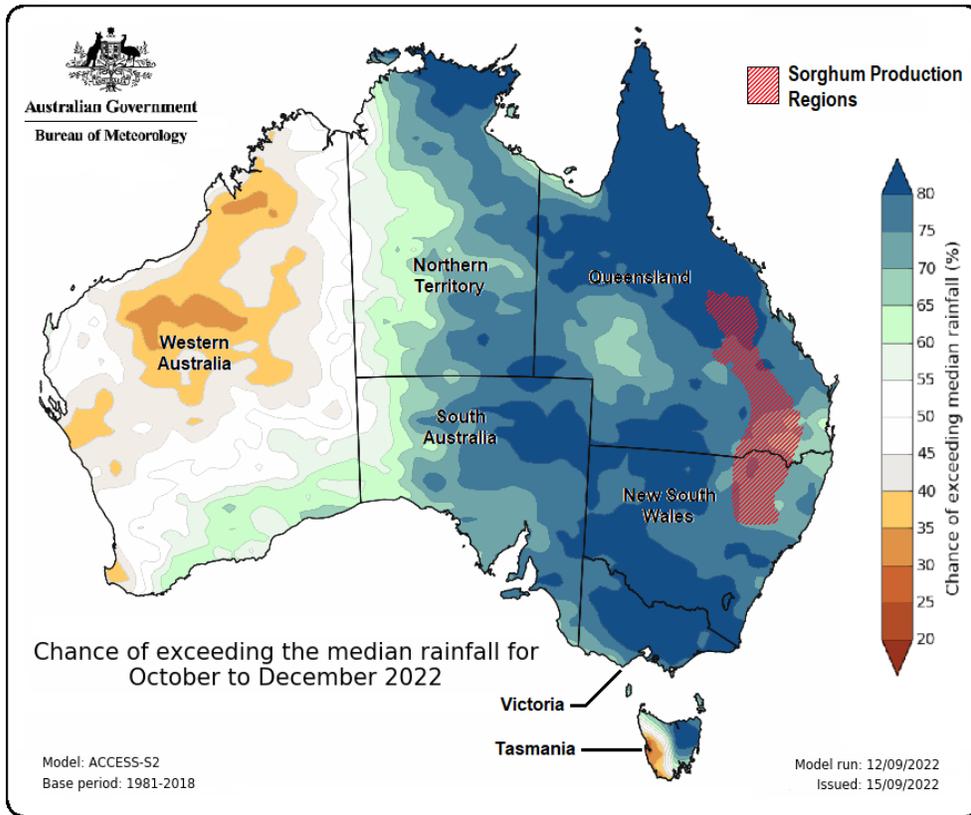


Source: Australian Bureau of Meteorology / FAS/Canberra

A further positive for sorghum growers is that in the next three months, in the early growth period, the Bureau of Meteorology forecasts indicate a very high likelihood of above-average rainfall across all of the sorghum-producing areas (see Figure 16). If this is realized, along with ample soil moisture at planting, it will give the forecast crop every opportunity to achieve above-average yields for MY 2022/23.

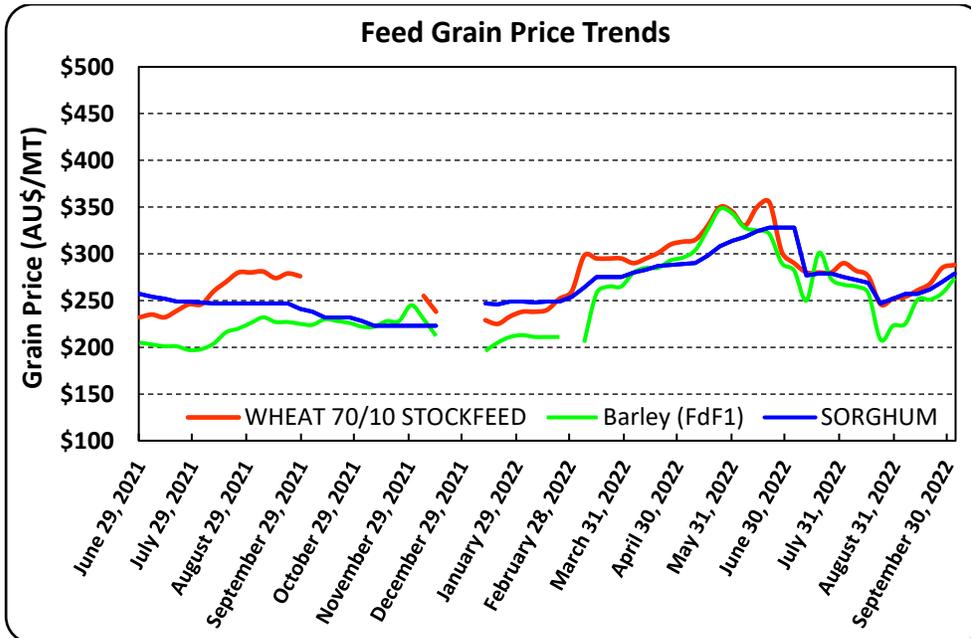
Cotton is the only other major summer crop competitor in the sorghum-producing areas. However, cotton is mostly grown under irrigation whereas sorghum is typically a dryland summer crop. Along with favorable conditions at the start of planting, sorghum prices are firm and have approximately tracked feed wheat and barley prices over the last two years. The sorghum price has increased over the last two months and is around AU\$40/MT above the same time the previous year (see Figure 17) which produced the third largest crop on record for MY 2021/22. Although input costs have risen - particularly for fertilizer, chemicals and diesel - the favorable conditions at planting, forecast rains, and sorghum prices are expected to support good margins for producers.

**Figure 16 – Rainfall Forecast – October to December 2022**



Source: Australian Bureau of Meteorology / FAS/Canberra

**Figure 17 – Feed Grain Price Trends**



Source: The Land newspaper

## **Consumption**

FAS/Canberra forecasts sorghum consumption in MY 2022/23 at 510,000 MT, and in line with the official USDA forecast but 50,000 MT higher than the MY 2021/22 estimate. The anticipated increased supply of sorghum from the much improved MY 2021/22 harvest is expected to result in higher opening stocks in the forecast year. With this and the forecast of another very good production year there is an expectation that sorghum prices may decline a little further to at least maintain competitiveness against domestic feed wheat and barley, which are also expected to be in plentiful supply.

The beef feedlot industry in Australia, the main user of feed sorghum, has maintained strong numbers of cattle on feed. As mentioned earlier strong pasture production is expected to carry through into MY 2022/23 which will limit the growth in feedlot cattle numbers. The 50,000 MT forecast increase in domestic sorghum feed consumption is very modest relative to the total forecast wheat, barley and sorghum consumption of 10 MMT (Note: the wheat and barley feed consumption forecast is unchanged from the MY 2021/22 estimate).

FAS/Canberra's sorghum consumption estimate for MY 2021/22 is 460,000 MT, 200,000MT higher than official USDA estimate. Feedlot cattle numbers have been high in MY 2021/22 and with ample supply from a big sorghum production year, consumption is anticipated to be higher than the official USDA estimate. The main production region of sorghum is nearby key feedlotting areas, so there is typically a transport advantage for sorghum.

The sorghum consumption estimate for MY 2021/22 is relatively low, in part due to there being virtually no industrial consumption of sorghum since the mothballing of the only fuel ethanol processing facility which used sorghum as its primary feedstock. Also, during the drought years (2017 to 2019) there was a lack of sorghum availability which resulted in many feedlots reconfiguring their facilities to use feed wheat and barley, many of which are unlikely to revert back to using feed sorghum.

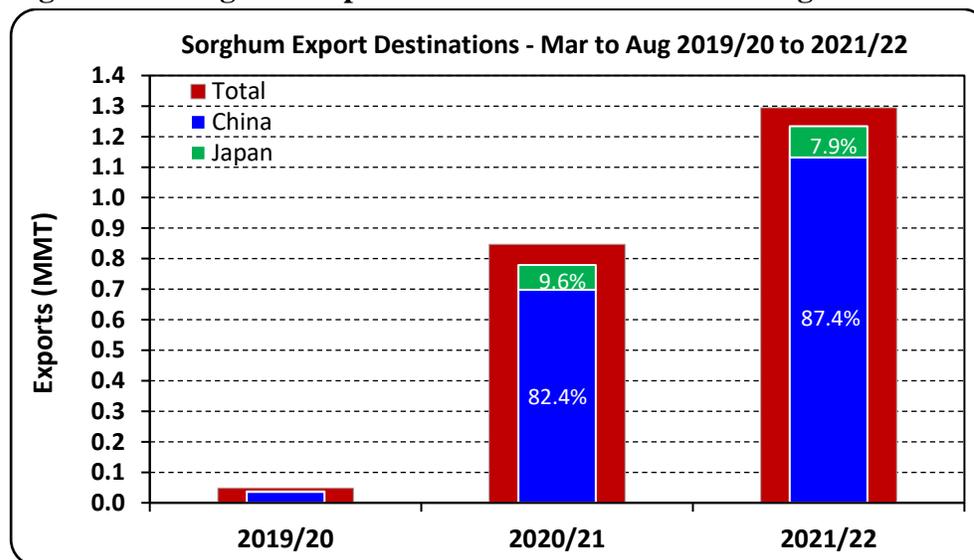
## **Exports**

The FAS/Canberra sorghum export forecast for MY 2022/23 is 2.1 MMT and is in line with the official USDA forecast. The same quantity of exports is also estimated by FAS/Canberra for MY 2021/22. With another similarly big crop forecast, no imports, and domestic consumption being relatively low compared to production, export volumes are largely driven by production.

The rate of exports in the first six months of MY 2021/22 have been very strong with almost 1.3 MMT exported. FAS/Canberra's sorghum export estimate is 2.1 MMT, just slightly lower than the official USDA estimate of 2.15 MMT for MY 2021/22. The pace of exports is expected to slow during the remaining six months of MY 2021/22 in line with past seasonal trends whereby around 40 percent of full year exports are in the second half of the marketing year.

China is traditionally the major export destination of Australian sorghum. For the first six months of MY 2021/22, China has continued this trend with 87 percent of overall exports. Japan also accounts for eight percent of exports over this period. These two nations account for 95 percent of exports to date for the MY 2021/22 season which was similarly the case in the prior year (see Figure 18).

**Figure 18 – Sorghum Exports Destinations – March to August 2019/20 to 2021/22**



Source: Australian Bureau of Statistics

## Stocks

Socks are forecast to remain stable in MY 2022/23 after being replenished in MY 2021/22 after production in that year achieving the second highest level on record.

Sorghum Market Year Begins	2020/2021		2021/2022		2022/2023	
	Mar 2021		Mar 2022		Mar 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Australia						
Area Harvested (1000 HA)	573	573	624	624	740	740
Beginning Stocks (1000 MT)	154	154	20	166	343	339
Production (1000 MT)	1639	2000	2733	2733	2600	2600
MY Imports (1000 MT)	0	0	0	0	0	0
TY Imports (1000 MT)	0	0	0	0	0	0
TY Imp. from U.S. (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	1793	2154	2753	2899	2943	2939
MY Exports (1000 MT)	1678	1678	2150	2100	2100	2100
TY Exports (1000 MT)	1235	1235	2150	2100	2100	2100
Feed and Residual (1000 MT)	85	300	250	450	500	500
FSI Consumption (1000 MT)	10	10	10	10	10	10
Total Consumption (1000 MT)	95	310	260	460	510	510
Ending Stocks (1000 MT)	20	166	343	339	333	329
Total Distribution (1000 MT)	1793	2154	2753	2899	2943	2939
Yield (MT/HA)	2.8604	3.4904	4.3798	4.3798	3.5135	3.5135

(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

TY = Trade Year, which for Sorghum begins in October for all countries. TY 2022/2023 = October 2022 - September 2023

## **RICE**

### **Production**

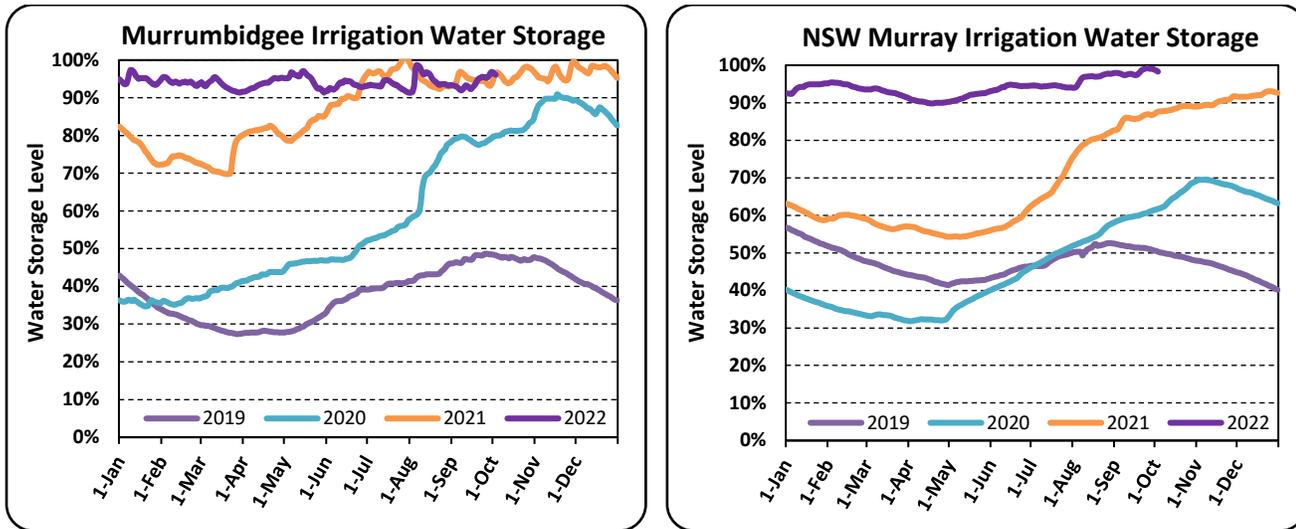
FAS/Canberra forecasts milled rice production at 575,000 MT in MY 2022/23, a 15-percent increase over the MY 2021/22 estimate and if realized would be 42 percent above the previous 10-year average. This is seven percent above the official USDA forecast for MY 2022/23. However, the FAS/Canberra forecast production is still far below the peak of 1.175 MMT achieved in MY 2000/01. The big increase in forecast production is primarily as a result of a vast improvement in irrigation water storage levels and associated improvement in irrigation water availability for the MY 2022/23 rice crop (to be planted from October 2022).

The 15-percent increase in forecast production for MY 2022/23 is primarily due to an anticipated expansion in crop harvested area forecast to 80,000 Ha, from the MY 2021/22 estimate of 65,000 Ha. This forecast increase in area is mainly a result of a significant improvement in the water allocation offered to producers at the start of the current planting period relative to the same time the previous year for the MY 2021/22 crop. However, there is an expectation that rice planting will be delayed this year due to saturated soils. There are reports that growers have managed to plant substantial areas during short windows of opportunity when the ground has been dry enough for planting equipment and some producers have also opted for aerial sowing of rice.

The strongest influence on rice production is the availability of water from the irrigation storage dams influencing the irrigation schemes in southern New South Wales. This is supported by overland and high waterway flows, enabling growers to fill their on-farm storage dams. The above-average rains in the autumn and winter period this year have strongly supported on-farm water harvesting in readiness for the MY 2022/23 season. But the biggest benefit has been the above-average rainfalls over the last three seasons which had resulted in the major storage dams, which supply the two main irrigation systems supporting the rice growing regions, being almost full at the end of the previous irrigation season. This has led to the dams for the two key irrigation systems, Murrumbidgee and NSW Murray, being essentially full well prior to the start of the MY 2022/23 rice crop irrigation season (see Figure 19).

The Bureau of Meteorology rainfall forecast for the October to December 2022 period in the rice production regions and associated irrigation water catchment areas is for a high likelihood of above-average rainfall (see Figure 20). This has added further confidence for rice growers to plan for an expanded rice program with a high degree of confidence.

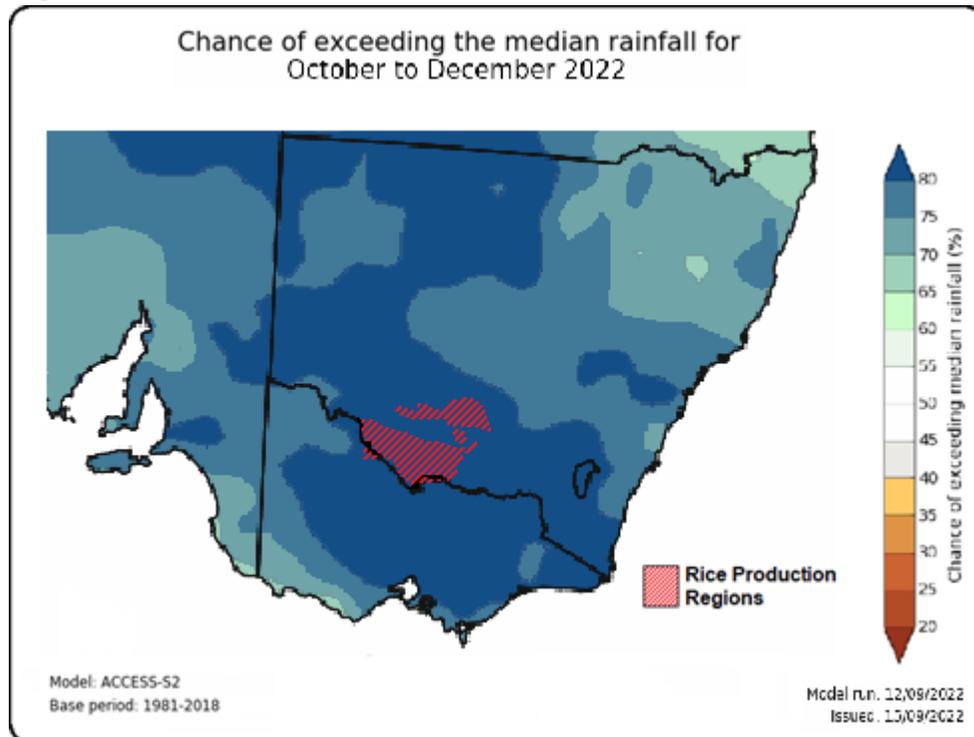
**Figure 19 – Irrigation Water Storage Levels**



Source: WaterNSW / FAS/Canberra

Notes: Murrumbidgee Irrigation Water Storage chart is the combination of Burrinjuck and Blowering Dams  
 NSW Murray Irrigation is the combination of Hume Dam and Dartmouth Dam storage levels

**Figure 20 – Rainfall Forecast – October to December 2022**



Source: Australian Bureau of Meteorology / FAS/Canberra

Rice growers are generally mixed farmers, and in the main rice growing area of the Riverina region, cotton production is a significant alternate summer crop option for many growers. Cotton production has expanded significantly in the region over the last decade and with strong prospects for the upcoming cotton season any further expansion of rice production towards much higher past levels is unlikely in the short to medium term.

FAS/Canberra's milled rice production estimate for MY 2021/22 has been revised up to 498,000 MT from the previous estimate of 485,000 MT and is aligned with the official USDA estimate and the ABARES estimate. Now well post-harvest, indications are that the crop was stronger than the previous estimates.

### **Consumption**

Forecast rice consumption by FAS/Canberra in MY 2022/23 is 365,000 MT and is a modest 5,000 MT higher than the MY 2021/22 estimate, but 15,000 MT below the official USDA forecast. With a further increase in rice production to well above average-production providing ample domestic supply, it is anticipated that consumption will reach past average levels of around 365,000 MT. With there now being essentially no COVID-19 related restrictions, domestic and international travel is now unrestricted. This is expected to result in some improved food service sector demand for rice from the prior year.

FAS/Canberra's rice consumption estimate for MY 2021/22 remains unchanged at 360,000 MT and in line with the official USDA estimate.

### **Trade**

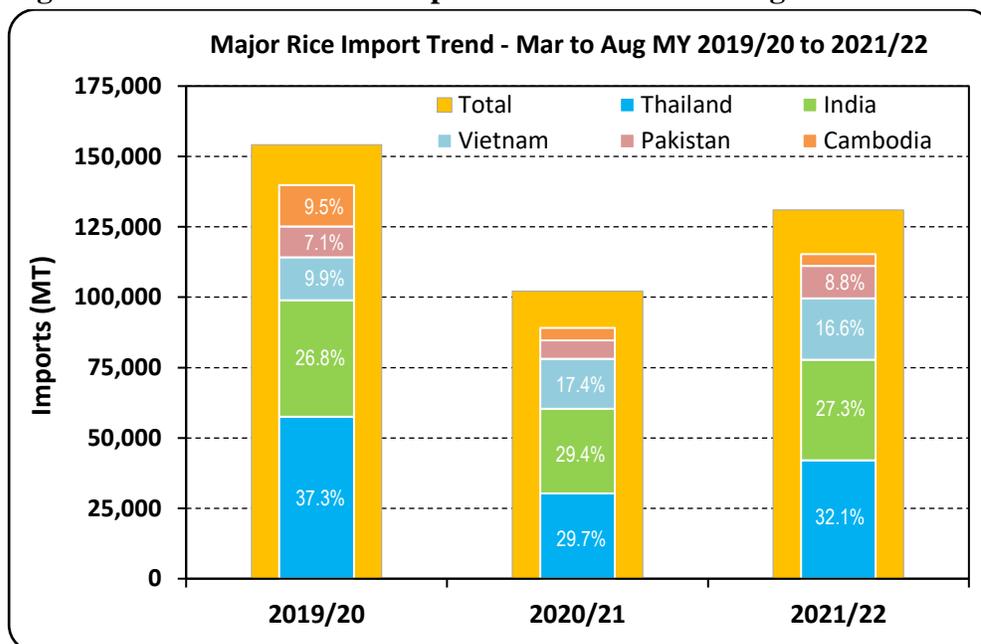
#### Imports

FAS/Canberra forecasts imports of 170,000 MT in MY 2022/23, a 55,000-MT (26 percent) decline from the MY 2021/22 estimate of 230,000 MT and 10,000 MT lower than the official USDA estimate. The large decline of forecast rice imports from the MY 2021/22 estimate directly relates to the large increase in forecast rice production along with the much-improved production from MY 2021/22 flowing into the first half of MY 2022/23 and necessitating lower imports. With this post drought (2017 to 2019) rice production recovery, imports are forecast to return to around the 10-year average pre-drought level.

Imports for the March to August 2022 period are at 131,019 MT which is strong, but a slowing of the rate of imports is anticipated for the final six months of MY 2021/22. This relates in part to seed stocks being fully depleted from the previous crop requiring replenishing for the current planting season for MY 2022/23. There is also a lag between the much-improved MY 2021/22 harvest, which is at the start of the marketing year, and the ramp up in the processing the rice ready for the retail market. With the rice harvest completed around late May, the processing of rice is reported to have ramped up to full production in recent months and is expected to flow through to improved product availability on the domestic market and an anticipated slowing of rice imports.

Thailand and India are by far the two largest rice suppliers to Australia consistently at around 60 percent of total imports over recent years (see Figure 21). The other three important sources of rice imports are Vietnam, Pakistan, and Cambodia - although over the last two years imports from Cambodia have diminished substantially. These five nations have consistently been the source of 85 to 90 percent of all rice imports by Australia over many years through high demand in low domestic production years, and during lower demand years when rice production in Australia is high. No significant change is anticipated to the importance of these nations for the forecast year when Australia's rice imports is expected to substantially decline.

**Figure 21 – Australian Rice Import Trends – Mar to Aug MY 2019/20 to 2021/22**



Source: Australian Bureau of Statistics

### Exports

FAS/Canberra's forecast for exports in MY 2022/23 of 280,000 MT is in line with the official USDA forecast and is 50,000 MT higher than the downward revised MY 2021/22 estimate of 230,000 MT. The higher anticipated exports for the forecast year are largely driven by an increase in production but also an expectation that the major rice mill will take the opportunity to carry-in an increased level of stock into the forecast year to rebuild their ending stocks to past levels in order to be prepared for any future production shocks that may occur.

FAS/Canberra's estimate of imports of Australian rice for MY 2021/22 has been revised downwards to 230,000 MT from the official USDA estimate of 250,000 MT. This is due to the pace of exports in the first six months being below expectation. Australian rice exports over the first six months of MY 2021/22 were at around 95,000 MT. The rice harvest occurred during the early part of this period, so this

volume was largely from rice produced in the previous MY 2020/21 smaller harvest. With larger rice production at the start of MY 2021/22, FAS/Canberra anticipates that the pace of Australia rice exports will increase for the remaining six months of the marketing year.

## Stocks

Rice stocks are forecast to recover further in MY 2022/23 on the back of a much-improved forecast rice crop production. Rice stocks were heavily depleted at the end of MY 2019/20 due to two successive years of drought affected poor production. This partially recovered in MY 2020/21 and is estimated to recover further in MY 2021/22 after successive years of improved rice production since the drought-affected period.

Rice, Milled Market Year Begins Australia	2020/2021		2021/2022		2022/2023	
	Mar 2021		Mar 2022		Mar 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	45	46	68	65	75	80
Beginning Stocks (1000 MT)	15	15	93	93	201	231
Milled Production (1000 MT)	305	305	498	498	539	575
Rough Production (1000 MT)	424	424	692	692	749	799
Milling Rate (.9999) (1000 MT)	7200	7200	7200	7200	7200	7200
MY Imports (1000 MT)	206	206	220	230	180	170
TY Imports (1000 MT)	204	206	220	230	180	170
TY Imp. from U.S. (1000 MT)	10	10	0	0	0	0
Total Supply (1000 MT)	526	526	811	821	920	976
MY Exports (1000 MT)	93	93	250	230	280	280
TY Exports (1000 MT)	72	72	250	230	280	280
Consumption and Residual (1000 MT)	340	340	360	360	380	365
Ending Stocks (1000 MT)	93	93	201	231	260	331
Total Distribution (1000 MT)	526	526	811	821	920	976
Yield (Rough) (MT/HA)	9.4222	9.2174	10.1765	10.6462	9.9867	9.9875
(1000 HA) ,(1000 MT) ,(MT/HA)						
MY = Marketing Year, begins with the month listed at the top of each column						
TY = Trade Year, which for Rice, Milled begins in January for all countries. TY 2022/2023 = January 2023 - December 2023						

## Attachments:

No Attachments