

# CROP REPORT

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## The 2021 Season – Western Australian grain harvest continues to set records

As the Western Australian grain harvest marched south over the last month, grain yields for all crops have continued to exceed pre-harvest estimates. Records are being set for individual paddock averages, crop type averages and regional totals over most parts of the state. Total state production for all grains will exceed 22 million tonnes, around 17 per cent more than the previous record in 2018.

It has been obvious since the start of harvest in the north of the state where actual yields were mostly coming in around 10 to 20 per cent above estimates, if that held true for the rest of WA, it would be a record tonnage. As harvest has moved south and grain yields continued to exceed estimates, the focus has shifted from “if we would hit 20 million tonnes” to “how are we going to deal with so much grain”.

There is more area to be harvested than is normally the case at this time of the year, with most of the country still to be harvested being in the higher rainfall regions where the very high yields are coming in.

There is a lot of grain in bags, particularly in the Esperance port zone and growers elsewhere are racing against the clock to finish before the local bins fill up.

Grain quality downgrades from weather have been isolated to those areas that received several rainfall events at the start of harvest and is not significant in the overall scheme of things. Low protein from lack of nitrogen has mostly been confined to wet areas where growers were not able to top up during the winter. However, the usual inverse relationship between grain yield and protein is resulting in low protein where grain yields have been well above average. The higher protein grades have mostly come off frosted areas.

Harvest has been frustratingly slow in the south of the state due to cool conditions and the time it has taken to dry down. Although this of course is one of the main reasons why WA is hitting a record tonnage.

The large area of crop that was sown in the low rainfall regions of the state has not produced the tonnage that was set up over winter due to the widespread frosts in September and the lack of spring rain. This has been devastating for those growers as it was looking so good up until the frost.

Soil moisture profiles are very dry in the medium and low rainfall regions due to the lack of spring rain and slow finish allowing crops to completely dry out the profiles. It is a vastly different story in the higher rainfall regions where stored moisture is well above average for this time of the year. The strategies for growers in these regions will be dictated by the potential or lack of potential this will imply depending on what happens with storms over the summer.

As harvest winds up in the north and central regions of the state, focus is now shifting to 2022 and what that may hold. There will certainly be a reduction in cropped area unless there is substantial summer rain and an early break. Even if this is the case, the high input costs will see growers pull back on area to

*GIWA gratefully acknowledges the support of DPIRD, CBH, DAS and contributions from independent agricultural consultants and agronomists in the production of this report.*

concentrate on the better paddocks where less inputs are needed, which will see an increase in area to pasture and fallow in 2022.

The dilemma for the low rainfall growers that did not hit their hoped-for grain yields and where a lot of the extra hectares were sown this year, is how much residual nitrogen and other nutrients are going to be available in 2022 to grow a profitable crop with minimal inputs. A big proportion of the extra hectares sown in 2021 were in the low rainfall regions with little fallow for 2022.

Canola hectares will likely keep rolling upwards as will legumes, and barley area will possibly come back a bit again from the record highs a few years ago. Wheat variety choice will probably swing to those known protein accumulators following the price spreads seen this year. Whilst no guarantee these will hold for 2022, learnings from previous years again held true for 2021 with specific varieties performing better than others at the same yield levels.

Growers will be looking at more “free” nitrogen from legumes and pastures in 2022 and the break crop area will certainly increase from the historical lows of recent years.

Wheat grain yields closed in on the yield advantage that barley normally holds even in the southern regions and made better use of the mild finish to the season due to being able to take more advantage of the longer grain fill period. Growers usually contract back to wheat when things are tight and if there is little summer rain and a later break, a larger percentage of the state’s crop will be wheat than previous years, particularly in the medium and low rainfall areas.

The higher rainfall areas are maxed out with canola area, with little room to push the percentage higher. Canola area in 2022 will be influenced by price, seed supply, timing of the break and subsoil moisture as well as the percentage already in the rotation. With all these variables in play, canola area for 2022 is a big question mark.

Canola was the most profitable crop in 2021 for many, and due to the lower input cost structures in 2021, it beat all other crops in most regions. With the higher input costs mostly set for 2022 for all crops, growers will be changing their strategy around production which has already created a lot more discussion than normal for this time of the year.

Oat grain yields were spectacular this year and combined with less area of hay cut due to the lack of market options, there are more oats around than earlier predicted. Milling oat quality in Western Australia this year has been excellent. Lupins have also been a star performer in 2021, and even with the lack of markets once supply hits certain quantities, the value to the rotation alone will probably mean more area planted in 2022.

### 2021 Season GIWA December Western Australia Crop Production Estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Pulses	State total
Kwinana	5,800,000	2,150,000	1,200,000	390,000	240,000	12,000	9,792,000
Albany	1,400,000	1,950,000	800,000	300,000	80,000	30,000	4,560,000
Esperance	1,700,000	1,300,000	700,000	20,000	60,000	60,000	3,840,000
Geraldton	2,950,000	200,000	420,000	5,000	350,000	2,000	3,927,000
<b>Totals</b>	<b>11,850,000</b>	<b>5,600,000</b>	<b>3,120,000</b>	<b>715,000</b>	<b>730,000</b>	<b>104,000</b>	<b>22,119,000</b>

*Note: the grain totals reported are for whole farm production. This includes on-farm seed and feed requirements as well as trade outside of the CBH network.  
Oat tonnage is for grain only and excludes hay.*

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## Geraldton Zone

Harvest in the Geraldton port zone is winding up with most growers finished or close to finishing. The final result has held firm from the start of harvest when it was clear grain yields were higher than expected. The near record tonnage for the zone is extraordinary considering the lack of spring rain. All regions in the zone went well including the eastern low rainfall areas.

## Kwinana Zone

### Kwinana North Midlands

Growers in the Midlands region have harvested or are harvesting above average grain yields for all crops except in those areas to the east where frost has taken out large areas of potential in the valley floors. Grain quality is good with some dilution in grain protein caused by high yield occurring in cereals. Both wheat and barley grain yields have been above average and the wheat has matched barley in a lot of cases. Canola yields have been the best ever and many lupin crops have gone over 2T/ha.

Harvest has been going slowly in the western areas due to the cool conditions and very slowly in the east where there is frost in the cereals. There is still a bit of grain to come in and many growers will not finish by Christmas.

### Kwinana South

Grain yields for all crops are above average rather than spectacular in the northern portion of the zone except for canola which is in all cases yielding well above average. The wet areas in the west and some frost in the eastern areas has taken the top off whole paddock averages.

The more southern areas bordering the Albany port zone are very good with wheat, barley and oats well above average. Grain yields just keep on getting better as you move south in the state. These regions received more spring rain than further north and combined with the cool conditions during grain-fill have exceeded expectations by a fair margin.

### Kwinana North East

Most growers in this region are going to end up with an okay year despite the dry spring and frost. Harvest has turned out to be a bit better than was feared following the frosts in September and most growers are going to return a profit. Grain yields have varied a lot due to time of sowing and topography. Sowing early on well set up paddocks and pushing nitrogen with above average sub-soil moisture and a good early break with the prospect of above average prices make sense, although unfortunately these early sown paddocks were generally the worst hit for frost.

Total production for the areas hit by frost is not close to what was in the paddock leading into spring which is disappointing. There are still some very good individual results particularly away from the worst of the frosted areas.

An unexpected positive has been the price spread on the higher protein grades of wheat which is mostly coming from the frosted areas.

## Albany Zone

### Albany West

The West Albany zone has still got plenty of grain to come off as growers are just recently getting into cereals. The canola has gone very well and yielded above average even where wet areas are included. Canola grain quality has been excellent with most in the high 40's for oil. Early indications are that the late frosts have taken the top off cereal yields and in the worst hit areas will only just get to average.

### Albany South

Harvesting has been slow due to the cool conditions and the difficulty in picking up the canola. Canola grain yields were good without being spectacular due to the wet areas keeping a lid on the top end of paddock averages. Some growers are now into wheat and the initial indications are that many will be around the 5t/ha mark.

The season has turned out far better than could have been imagined back in the middle of winter when so many paddocks were underwater. Even some of the re-sown country looks like it will yield in excess of 3t/ha.

### Albany East (Lakes Region)

The Lakes District is having the “best year ever” with well above grain yields and historically high prices coming together at the same time resulting in a rare event few have seen before in the region. A combination of a good start, above average growing season rainfall without it getting too wet, a mild spring with no frost and timeliness of rainfall events, has made this year “one out of the box”.

## Esperance Zone

The Esperance port zone is in the last throes of harvest, already producing a record tonnage for the region. It has been a good year for the whole region which does not normally happen from start to finish. Good rainfall in the lower rainfall regions, minimal frost in all areas and minimal waterlogging along the coast has resulted in a final result that is going to be well over 3 million tonnes.

All crops in the zone have yielded above average. Even where frosted, the wheat has yielded in excess of 3t/ha. Pulse crops are back in favour with all going particularly well suggesting last year was just an aberration and the region can be a serious producer of quality pulse crops.



## Season Outlook, December 2021

Ian Foster, Department of Primary Industries and Regional Development

### DPIRD climate summary

Growing season rainfall in 2021 was above average for most of the agricultural area, especially the south. The rainfall pattern of good early and late season rain is consistent with a high-production year. Spring daytime temperatures have been mild, with reduced heat impact on crops. Frosts have occurred but were centred more to the north-east than usual.

Climate conditions in the Pacific Ocean show a La Niña event has fully developed and will likely continue over summer. Historically, this increases the chances of tropical cyclones. The negative Indian Ocean Dipole (IOD) event in the tropical Indian Ocean has almost gone but leaves warmer oceans and more cloudiness to the northwest of WA.

Most climate models have neutral rainfall outlooks for January to March 2022 for the agricultural area of WA. Daytime temperatures are expected to be notably above average over summer, with increased risk of hot days. See Figure 1.

The seasonal fire danger risk is also increased over southern WA, coming from increased fuel load, seasonally dry conditions, and a high chance of above normal temperatures.

### Bureau of Meteorology seasonal outlook summary, issued 9 December 2021:

- January to March rainfall is likely to be above median for eastern Queensland and north-eastern NSW, as well as small patches elsewhere.
- January to March maximum temperatures are likely to be above median for most of Australia, except parts of eastern Australia and the southern coastline of WA where the outlook is either mixed or below median.
- Minimum temperatures for January to March are likely to be warmer than median nationwide.
- There is an increased chance of unusually high minimum temperatures (in the top 20 per cent of historical records) for January to March over all of Australia (1.5 to more 4 times the usual chance), with the highest likelihoods for northern Australia and north-western Tasmania.
- The La Niña in the Pacific Ocean, the positive Southern Annular Mode (SAM) and the strengthening Madden-Julian Oscillation (MJO) over the western Pacific are likely influencing the above median rainfall outlooks.

Additional information is available from:

[DPIRD: Seasonal Climate Information](#)

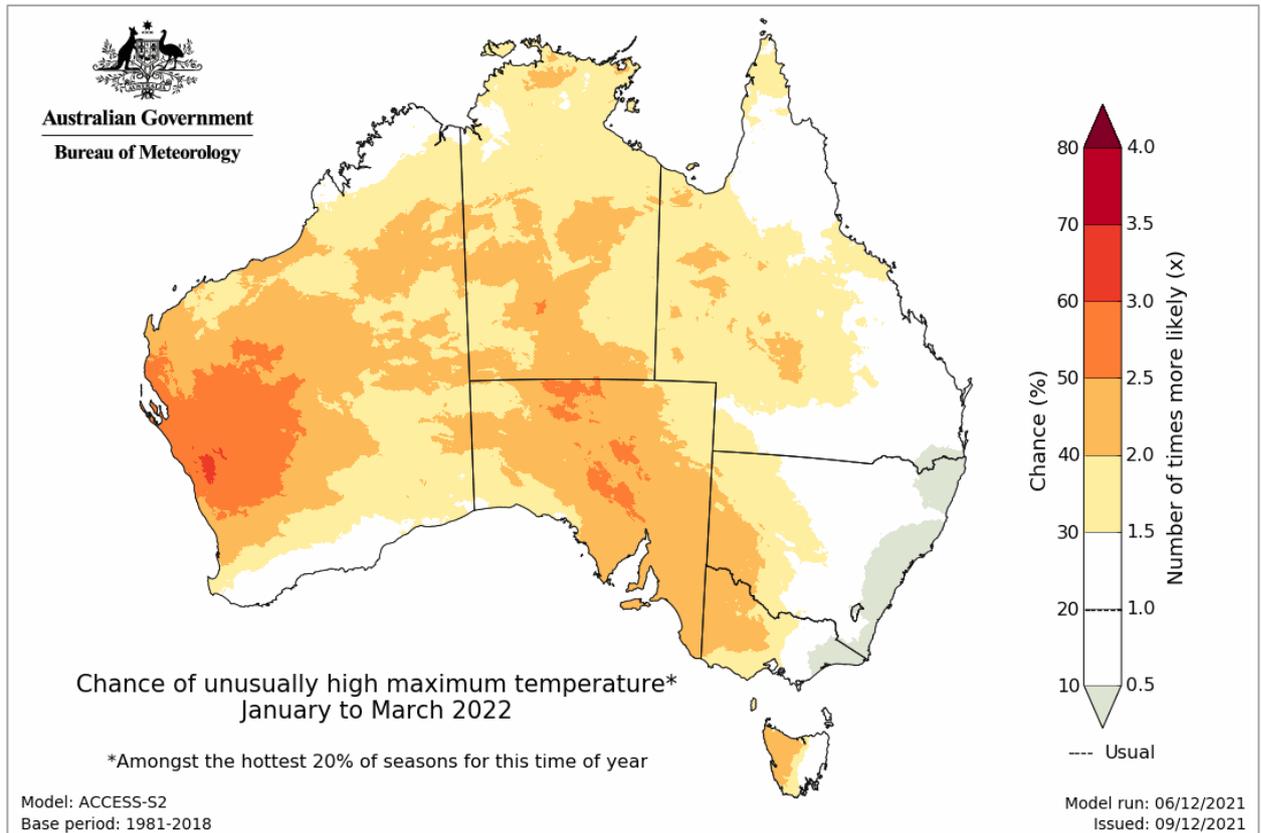
[DPIRD: Soil Water Tool](#)

[BoM: Seasonal Rainfall Outlook - weeks, months and seasons.](#)

[BoM: Decile rainfall for April to October 2021](#)

[BoM: Seasonal Outlook video](#)

[BoM: Landscape soil water balance](#)



**Figure 1. Chances of unusually high daytime temperatures over January to March 2022. From BoM, issued 9 Dec 2021.**