CROP REPORT

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GIWA Grain Industry Association of Western Australia

October 2023

The 2023 Grain Season – West Australian grain yield potential continues to slide.

Since the last Crop Report a month ago, the worst-case scenario has eventuated right across all grain growing regions of Western Australia. No further spring rain and unseasonably hot windy conditions did not allow any increase in the grain yield potential of the better crops and pushed those crops that were already on the edge of crashing to drop further potential. The result is a decrease in expected tonnage of about 500,000 tonnes or about 3 percent from last month.

Harvesting is underway in the central and northern districts of the grain growing regions of Western Australia and is just starting further south in the state on early sown barley and canola crops. Initial reports indicate the actual tonnage produced for Western Australia is going to be less than expected just prior to the start of harvest a few weeks ago. Persistent hot temperatures, combined with windy days and no further falls of rain, have driven grain yields down in all regions of the state. Most growers are reporting actual yields to be less than they looked when standing in the paddock.

The hot temperatures and lack of sub-soil moisture during the final stages of grain fill has taken the top off the potential grain yields and reduced grain quality, with many crops now going to have issues with screenings. The one-off low rainfall event in early September appears to have helped crops in the central region avoid very high screenings, although this is not the case in the majority of the northern regions.

Whilst 15 million tonnes of grain for the state is well down on the last few years, historically it is still a good result considering the lower area planted, the actual rainfall and the timing of the rainfall. On water use efficiency alone, total grain production would have been 30 percent less 10 years ago.

Growers who got out of oaten hay when prices dropped mostly replaced those paddocks with canola. The result has been a big reduction in the area of oats destined for hay, particularly in the traditional northern hay production areas of the state and around the low rainfall eastern Lakes District. There was not a lot of area cut for hay this year and this is likely to remain the case even with greater access to export markets. Even with new season hay prices back up to the higher decile price ranges, the quick exit out of hay into other crops is not likely to flip to a quick return to hay in the near future, unless there is a significant canola price shock.

There are also positive signs on the pulse marketing front and whilst plantings have been down in recent years, agronomically they have a good fit. It is expected that Faba Bean plantings in particular will increase in 2024.

2023 Season GIWA October Western Australia Crop Production Estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Pulses	State total
Kwinana	3,800,000	1,400,000	800,000	140,000	150,000	12,000	6,302,000
Albany	1,500,000	1,500,000	720,000	220,000	70,000	20,000	4,030,000
Esperance	1,550,000	840,000	550,000	20,000	30,000	30,000	3,020,000
Geraldton	1,275,000	100,000	150,000	5,000	70,000	2,000	1,602,000
Totals	8,125,000	3,840,000	2,220,000	385,000	320,000	64,000	14,954,000

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.

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Geraldton Zone

Growers are well into harvest in the Geraldton Port zone. As expected, there is not much to get excited about as yields are low and grain quality poor in most areas. The only exception is the strip of country south of Yuna down to Mullewa and east of Eradu that received the storm rain in March. Crops in this area and some areas closer to the coast are okay, with grain yields close to longer term averages. Although for most growers, wheat grain yields of less than 1.0 T/ha and very high screenings are the norm. Grain quality is variable due to soil types reacting differently to the lack of moisture and hot conditions at grain fill. As a result, segregations have been set up to capture the high protein grain that generally has high screenings as well.

Any crops on heavy country away from where the early storms hit which provided some sub-soil moisture reserves, have mostly burnt off and grain yields are very low. On the lighter country it is more variable and grain yield and quality has been influenced more by when the stress hit crops, rather than simply the total amount of growing season rainfall. The timing of the stress has resulted in some crops with higher biomass ending up with grain yields of around 750kg/ha and screenings of more than 15%. While other paddocks that had less biomass still have low yields of less than 1.0T/ha with low screenings of 1-2% and grain protein in the 13-14% range.

Another interesting observation has been the impact of nitrogen application timing, with crops that had most applied up front, handling the dry conditions better than those that had the majority applied after emergence, particularly on the heaver country closer to the coast.

Frost has also contributed to taking the shine off crop yields and added to the poor screenings being brought in. Even though the frosts in late August and early September were not overly severe, crops under stress when the frost hit were affected more than you would normally expect.

As usual, the ameliorated country was less impacted by the dry season even where growers harvested very high yielding crops over the last two years, and soil moisture probes were showing very low moisture levels. Total grain production for the zone will probably end up similar to 2019 - a very low rainfall year - which is also interesting as many growers received significantly less rainfall in the 2023 growing season than 2019.

The unseasonal hot finish has reduced the crop potential further from the last report a month ago in the whole of the northern agricultural zone.

Kwinana Zone

Kwinana North Midlands

Harvesting will get underway on canola and some barley next week. Some barley has come in earlier this week, mostly going feed due to low grain weight. Barley has been the zone's shining light all year and grain yields were expected to be okay considering the low rainfall, although growers are now expecting grain yields to be down due to the very hard finish and are fearful with many considering the finish to be the tightest on memory. Rainfall has been one of the lowest on record and the consecutive days of 35, 36, 37 degrees Celsius experienced at the end of September is unheard of. Mid 30s in the first week of October is Geraldton weather and the warm days with wind have dropped yield expectations from a month ago.

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The impact of the mild frosts at the end of August and early September is now apparent in the east and southern portions of the zone and this has contributed to the lower expectations. The light rainfall event in early September did help stop the slide in grain yield potential by allowing some later sown crops to emerge out of the boot, although the overall impact on the zone was minimal.

The reduced areas of oaten hay ended up being cut early due to the crops losing biomass due to the dry hot conditions, rather than accumulating weight. The result has been hay yields well below recent averages and well below the cost of production.

Whilst growers generally dialed back their spending with the forecast of a low decile rainfall year, many crops that would normally be in a secure area were overfertilised for the eventual rainfall and the extra nitrogen has contributed to the high screenings in the cereals that have been harvested. This is expected to be the case for the wheat as well.

The west and southwest regions are as good as they have been all year and the line from Dandaragan south of New Norcia and down to Bolgart is the only area of the zone that will achieve average yields.

Kwinana South

Growers are just getting underway harvesting barley and canola, which is a week or so earlier than normal. Early yield indications are about what was expected, with some of the better barley crops yielding 2.5-3.0T/ha, with very low weight. Not a lot of barley is expected to make malt grades due to the high screenings. Canola grain yields have been quite variable with highs of up to 1.7T/ha, ranging down to under 1.0T/ha paddock averages. Oil percentages are at the lower end, mostly ranging between 38-42 per cent. The hot, quick finish has reduced the potential for increased profit from oil bonuses this year.

Frost has ended up being more extensive than first thought and has licked into both the barley and the wheat. It has had more of an impact in the lower lying paddocks than the dry conditions. . Wheat is likely to be less affected due to its later planting and development stage when the frosts hit. Canola has also been hit by the frost and actual paddock yields are in some cases going 20-30% below what growers expected.

Canola was potentially going to be “profit” crop this year for the region and has looked good right up until the last hurdle. The heat and frost have taken the top off most paddocks south of the great Eastern Highway and canola in the lower rainfall regions north of the Highway finished too quickly to deliver the grain yields expected from what looked to be good crops.

Some of the better-looking lupin paddocks have been taken off before barley and canola, with grain yields of up to 1.5T/ha.

Overall, the rain in September was a life saver and whilst it did nothing more than stop the slide in grain yield further north, in the central regions it had a significant impact on holding onto the yield potential that was there. Although most growers are resigned to the fact that many paddocks will have high screenings and grain quality issues to deal with.

The western rim of the zone has been good all year and will still be good once harvesting gets underway in a couple of weeks’ time. The areas around Quairading up to Cunderdin, and east to Bolgart and south towards Narrogin had a late start, although the September rainfall events of 20mm and 25mm, have minimised the impact of the hot windy conditions during grain fill.

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Kwinana North East

It is early days in the lower rainfall regions of the Kwinana zone with growers just getting underway with harvest on barley and canola crops in the past week. The lack of reports being heard on canola yields likely means yields are poor. A similar area of canola was planted in the region compared to 2022, which was a record area of canola plantings for the region. Many had high hopes as most canola went in early and was expected to miss the heat shock in the end of the season. The low rainfall and quick season cut off combined with frost in the southern areas dropped the yield potential of many canola crops by up to 30-40 percent form what they looked like at the end of winter.

The wheat was generally less affected, and most is expected to yield close to or just below long-term averages. Exceptions to this are the very dry areas such as around Mollerin north to Kalannie and south to Pithara. Further east towards Beacon and Bonnie Rock picked up more of the storm rains, and cereal grain yields are expected to be reasonable.

Cereals on well managed fallow in the low rainfall extremes and the drier areas of the zone without sheep are yielding 1.2-1.4T/ha, and 1.0T/ha with sheep. While the heavy country that produced very good yields last year simply did not have the moisture reserves, resulting in most crops on ungrazed fallow yielding less than 1.0T/ha, and paddocks that had crops the previous year yielding between 500-600kg/ha.

Albany Zone

Albany West

Harvest will get underway in the next week or so with most crops looking like they will not hit the expected yields of a month ago. Back then, it was looking like it could be another year out of the box. The heat and lack of rain has reduced expected grain yields by up to 20% in some cases. Canola that was looking to go 2.5T/ha is now likely to go closer to 2.0T/ha. Cereals are expected to be down from the anticipated 4.0T/ha to 3.5T/ha. Barley crops are getting close to being ready for harvest, although the wheat crops are mostly still filling grain. The long season wheat varieties that were looking sensational have ended up flowering too late and will not yield anywhere close to how they looked all year.

Canola performance is going to be erratic across the whole Albany zone. Some of the newer varieties that were going well in the NVT trials have bombed out with pod abortion, lack of biomass and early cutout of flowering. It is unclear why, although the 2023 growing season was quite different to recent years where there were very mild winter and spring temperatures. Rainfall has been similar to recent years, although maximum temperatures have been well below what has been experienced in the last 20-30 years, but the season-ending heat came in earlier. As a consequence, overall canola production from the region is going to be well down on expectations.

Albany South

The mixed conditions in the zone look like playing out for the 2023 harvest. The dry areas from west to east north of the Ranges that had a later start and then got very wet, have not had an opportunity to fully recover and will be down in grain yield from adjacent areas north and south. Large areas in the region from Broomehill across to Jacup and Jerramungup missed out on the early rain and then became waterlogged in June when crops were emerging, particularly on the heavy country. The recent heat has

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stopped the crops in their tracks across the whole zone and the change in growing conditions was too quick to give time for recovery. This is in sharp contrast to the last few years. As a result, the region as a whole will be more back to long term averages, rather than above average as was expected prior to the rain cutting out and the temperatures ramping up in the last few weeks.

The unseasonal heat combined with wind has taken the top off grain yield potential for most crops in the zone, although once harvest gets underway, it's going to be interesting to see how recent improvements in genetics and specifically drought tolerance in the cereals translates to grain in the bin. Many wheat crops in particular have had their leaves burnt off and lost flowering sites, whilst the stems have remained green. As there is still moisture underneath the crops the question is, will the crops be able to fill grain on this reduced leaf area?

In general, there is quite a distinction between the earlier crops and the later crops right across the zone. The early crops are very good, including in the drier areas to the northeast around Nyabing and Pingrup. Closer to the coast this is also the case, with the earlier sown crops getting through the waterlogged conditions in mid-winter better than the later sown crops.

There has been a wholesale switch away from Planet barley this season due to leaf disease pressure, and the switch to the newer varieties such as Maximus looks to have paid off with less disease during the growing season, which should result in better grain quality.

Final grain-fill in the canola crops was cut short by the heat and the top end yields will not be there as they have in recent years. Most canola crops did not bulk up to the extent that they normally would, possibly due to the very cold, cloudy winter. Variety performance is expected to be more erratic with known varieties not sticking to the plan.

Albany East (Lakes Region)

There has been a lot of desiccating and swathing over the past few weeks with some growers planning to start harvest next week, or the following week.

There has been very little rain since mid-September and this has taken the shine off the potential grain yield for all crops. The later crops were looking good until recently, although most are now expected to be less than they look. Most growers are still expecting longer term average yields on what could have been a very good year had there been just one more decent rain. Missing out on the spring rain has had a big impact.

The barley looks pretty good although the later sown wheat crops are still filling in some areas, so the shine will be taken off those crops as well.

Agronomy wise it has been a pretty uneventful month thanks to the dry weather. There ended up being no major bug issues except for a few flights of budworm that came in too late to have much of an impact on the canola and lupin crops. No bugs have come in since mid-September apart from some growers reporting budworm, but that hasn't been widespread. A lot of growers got out of the hay game when prices dropped and have replaced those paddocks with canola, so there is not much hay around the area this year.

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Esperance Zone

There has been a little bit of harvesting going on to the east of Esperance town and early indications are canola in the better areas around Beaumont has been yielding up to 2.4T/ha and down to 1.5T/ha in the poorer areas. Oils have been between 37 – 42per cent, although it's early days as not a lot of growers have started harvest yet.

Barley crops harvested on the eastern side of the highway in the better rainfall regions near Grass Patch have been in the mid 2T/ha – 3T/ha range.

Harvesting is expected to get fully underway later this week and into next week on early barley crops and swathed and desiccated canola crops.

Similar to the rest of the state, there has been very little rain since August, and this has brought a short, sharp finish to the season.

The early crops will be the winners. Everything that germinated later will be a worry. It will be interesting to see what the wheat does without the finishing rain. Growers are expecting actual grain yields for the better grown wheat crops will be 20 per cent down on what they looked a month ago, and to have high screenings.

Budworm have been problematic this year continuing the trend seen over the past few years. Evidence of budworm has been seen as far south as Fisheries Road, which is very unusual. Later flowering crops have had huge numbers of budworm. Late sclerotinia and blackleg pod infection has been a problem again this year, which wasn't really expected in such a dry finish.

Overall, the poor areas are expected to be as poor as we first thought and the later crops, wheat in particular, in the good to average areas will take the biggest hit in reduced grain yield with the lack of rain and early onset of heat.

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Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

Season Outlook, October 2023

Ian Foster, Department of Primary Industries and Regional Development

Rainfall

Seasonal rain April to September continued in a drier than normal pattern for the northern and eastern agricultural areas and parts of the south-west (see Figure 1). Some parts have had better seasonal conditions, with the timing of rain events being especially important in supporting crop yield potential.

Rain to date this month has been mostly confined to the south-west and south coast. Estimated soil water storage is lower than normal for this time of year. An additional factor in recent weeks has been strong easterly winds coupled with high temperatures.

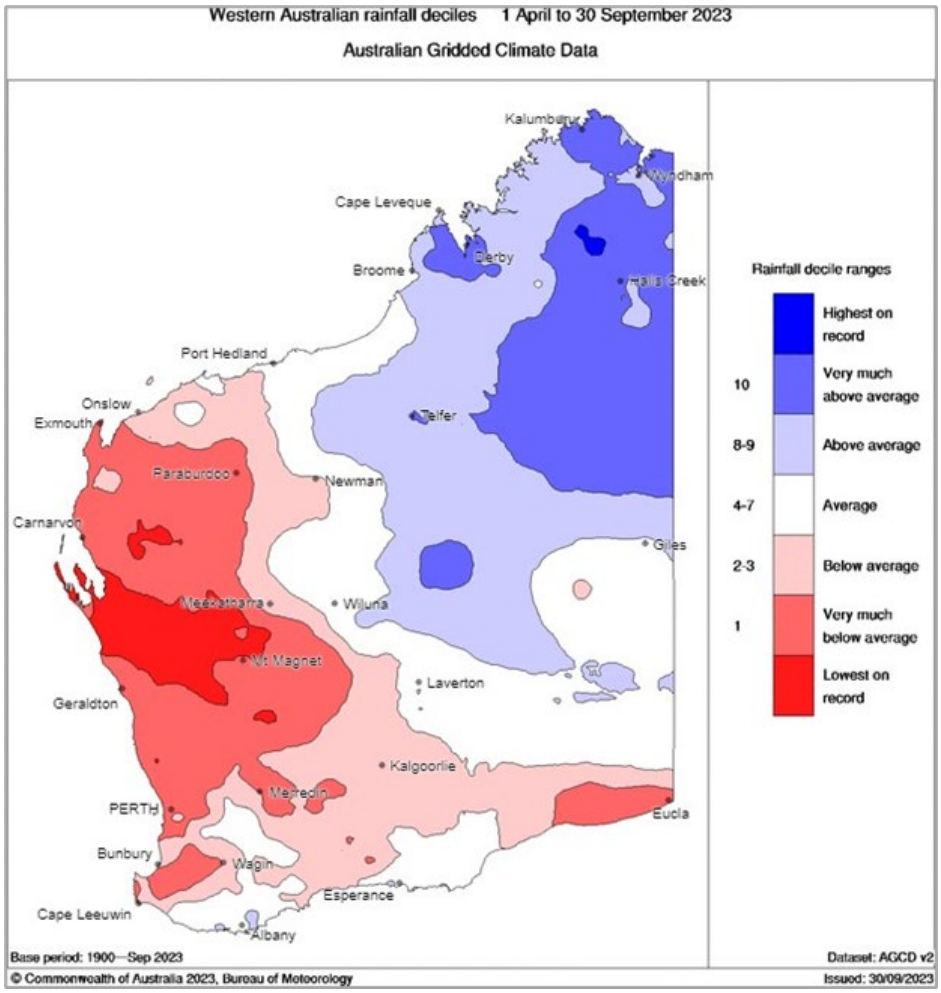

Figure 1: Rainfall deciles April to September 2023
Source: Bureau of Meteorology (2023)

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Forecast

An El Nino event is established in the Pacific Ocean and is likely to persist into autumn 2024. A positive Indian Ocean Dipole event is also underway in the tropical Indian Ocean. Their combined impact historically suppresses rainfall over western parts of WA over summer.

These events are also influencing an expected later onset of the Australian monsoon, as well as a prediction of fewer than normal tropical cyclones for the 2023-24 season.

Most climate models continue to indicate that below normal rain is more likely over coming months for most of WA, although the Bureau of Meteorology's model has a neutral rainfall outlook for summer.

Temperature

The past three months, including early October, have been notably warmer than normal as predicted. Some frosts occurred in September and early October over central and southern agricultural areas.

Predictions of above normal temperatures continue over summer. Chances of unusually high maximum temperatures are 4 times higher than normal for the November to January period for most of western and central WA, see Figure 2.

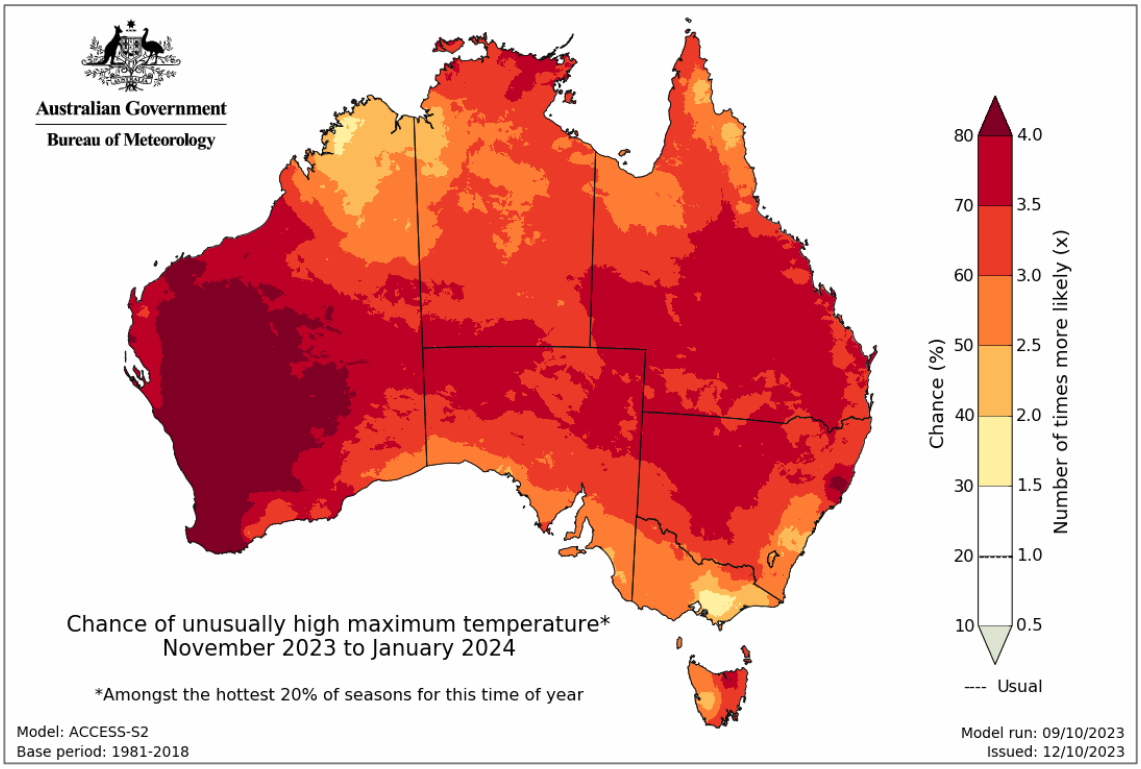

Figure 2: Chances of unusually high maximum air temperature over November 2023 to January 2024.
Source: Bureau of Meteorology (2023)

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Additional information is available from:
DPIRD: Weather stations
DPIRD: Soil Water Tool
DPIRD soil moisture probes
BoM: Decile rainfall for April to September 2023
BoM: Rainfall outlook for the next week
BoM: Seasonal Rainfall Outlook
BoM: Australian Water Outlook

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