

Summary - 2016 Season

“The tale of two seasons” and “The season that could have been” describes the somewhat unpredictable 2016 season. Nevertheless, it resulted in Western Australian grain growers producing a record harvest with some areas of the state performing better than others.

Rain was a big factor in the success of the season, with a number of summer rain events boosting soil moisture to substantial levels. Regular April rain enabled early sowing of crops resulting in early signs of a robust season. Up until the end of August the season was tracking very well in most regions.

Waterlogging along the south coast and south west districts of the Albany zone was significant and had a strong negative impact. Most growers had ideal soil moisture levels, and crop growth in the main was advanced and substantial. The only downside for many was the very cool temperatures, with 2016 presenting the coldest winter for many years, and a longer cooler finish to the season.

Frost started occurring in early August in the eastern wheatbelt. With advanced growth, some crops suffered badly and more than usual for the time of year. Frosts were particularly damaging late September to mid-October in the Lakes districts of Kulin, Kondinin, Hyden and Lake Varley. Frost damage was also seen at Miling, Dalwallinu, Salmon Gums and many other regions. The impact of the frosts has been difficult to assess, but GIWA estimates at least 2 million tonnes of grain was lost.

Considering the impact of frost, achieving the record 2016 harvest shows that the generally excellent conditions for crops across WA and subsequent yield potential was underestimated across all districts. Industry were impressed with canola yields in medium and low rainfall districts, barley yields in the Kwinana West zone, and lupin yields in the Geraldton zone.

Despite pressure on protein levels, the quality of grain produced in 2016 was mostly excellent. There was a small amount of germ end staining in barley and frosted grains caused a small amount of wheat to be downgraded. Frost in the Kwinana East zone caused severe screening issues in barley to the extent that some were not of receivable quality.

The final total estimate of 18.2 million tonnes is a remarkable achievement for WA grain growers which could easily have been over 20 million tonnes but for the frosts.

2016 WA Crop Production estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Field pea	State total
Kwinana	4,535,000	1,974,000	847,000	521,000	218,000	10,000	8,105,000
Albany	1,580,000	1,205,000	485,000	372,000	59,000	5,000	3,706,000
Esperance	1,362,000	846,000	501,000	19,000	18,000	20,000	2,766,000
Geraldton	2,688,000	142,000	317,000	14,000	419,000	1,000	3,581,000
Totals	10,165,000	4,167,000	2,150,000	926,000	714,000	36,000	18,158,000
Compared to 2015 harvest	10.5%	35.6%	39.3%	80.5%	58%	2.9%	22.6%

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.

2016 WA Crop Yield estimates (tonnes per hectare)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Field pea
Kwinana	1.66	3.95	1.85	2.66	1.76	1.08
Albany	1.92	2.55	1.54	2.94	1.53	0.83
Esperance	2.42	2.80	1.80	2.48	2.04	1.35
Geraldton	2.68	2.55	1.97	1.38	2.26	1.08
Averages	2.17	2.96	1.79	2.36	1.99	1.08

Kwinana Zone

The Midlands

Harvest results in the Midlands region were very good despite frost damage in a number of districts and many growers recorded their best harvest on record.

Canola performed brilliantly with yields at west Wubin of 2.3 t/ha average, just 100 kg/ha behind wheat.

Interest in growing canola will continue for 2017 with the area likely to rise by at least 5%. The break crop percentage in the region could rise from 25-30% to 30-40%. Any rise will take out lupin or wheat plantings.

Oil content was excellent with some crops recording 46% and the majority recording 49 to 51%. The season was highlighted by the best yields coming from the poorer soil types on hills and poor yields in the valleys, highlighting the cool finish and impact of frost.

Lupins were high yielding with 2.5 to 3 t/ha common yields. For the first time in the region many growers were rejected at CBH for sclerotinia. Lupins had to be cleaned for delivery, showing the very high risk for sclerotinia in canola in 2017 if winter temperatures are warm.

Barley crops went very well despite the frost damage and overall performed better than wheat for frost damage. Even where damage was plainly visible, final paddock yields were excellent. Malt quality was achieved readily with most rejections being for germ end staining. Feed deliveries were rejected for protein or screenings. It is estimated that frost took 5 to 25% yields across the region.

Wheat protein was low, making blending pre-delivery required and/or optimising post-harvest. Milling grades were achieved for the majority.

Oats achieved very high yields in the region however frost damage was also evident. Where export hay was delivering 10-11 t/ha of dry matter, grain harvest in uncut areas hit 4 to 5 t/ha.

In late January 2017, there was rain throughout the region, with around 20 to 40 mm being common. With more rain forecast the production risk for 2017 looks manageable.

Kwinana East

Yields were generally average to slightly below average in the Kwinana East zone. Spring rainfall was low and combined with the frosts caused crops to produce average results.

Harvest was a bit longer than normal with a mix of good and poor crops causing a lot of pre-delivery blending to be required. Generally, grain protein was low and it was apparent there was caution around nitrogen applications and a lack of robust rotation. Overall, the soft finish was critical and forecast yields underestimated the final result.

Barley was worst affected by frost with average yields of around 1.5 t/ha. Quality was poor with many paddocks unable to achieve Feed 3 grades due to extreme light weight. Scope barley seemed worst while Litmus seemed best.

Wheat delivered similar results of around 1.5 t/ha and where frost was recorded grain quality was poor.

Canola was the best crop in 2016 with top yields at 2 t/ha. East of Merredin in very early planting canola, yields hit 2.5 t/ha. Final averages across districts were close to 1.5 t/ha with good quality. When planted early, Stingray performed poorly.

The canola area potentially could rise by 10% in 2017.

Field peas disappointed and it's likely the area will decrease. There will be a strong swing to chickpeas where growers can find seed.

Lupin yields were average at around 1.2 to 1.3 t/ha.

Apart from isolated storm damage late January / early February, where some growers received 150 to 200 mm of rain, most growers have good levels of soil moisture and will welcome further rainfall forecast.

Kwinana West

While the estimated frost damage/losses in hindsight seemed about right, yield estimates for unaffected crops exceeded expectations.

Canola was exceptional, hitting 2.4 t/ha east of Merredin. Canola yielded close to cereal yield. Wheat recorded 5 t/ha in many paddocks.

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Overall, wheat suffered the most frost damage, particularly compared with barley, although barley was mostly planted in less susceptible landscapes. Oats suffered frost damage as well.

Overall Kwinana West yields were well above average. There was big variation in yields with the reverse of normal occurring, the hills yielded far more than the valley floors. Yields were high due to the cool long finish without the usual heat shock. In western districts canola yields were close to 3 t/ha, wheat at 4.5 t/ha and barley to 5 t/ha.

Wheat quality was mixed with low protein and frosted grains causing issues. Screenings in affected barley crops reduced grain to Feed status.

The canola bubble will continue with the general perception that canola is the preferred crop to consider in 2017. Western districts will continue with RR canola and eastern districts will favour TT canola.

After the recent rain, there is water everywhere, the Mortlock River is bursting its banks and flooding roads, and the Irwin River is running a banker. Further rainfall forecast for will only improve the prospects for the 2017 grain crop.

Albany Zone

Lakes region

Forecast yields from December turned out to be about right.

Yields north of the Lake Grace/Lake King road were lower than those south of the road. Northern recordings were more affected by frost with southern farms recording 2.7 to 2.8 t/ha for cereals.

In the Kondinin district yields were 200 kg/ha better than in Kulin, which in turn was 200 kg/ha better than Lake Grace. Most growers recorded average to below average yields. The potential, without frost, was far better.

Barley seemed to suffer more for frost than wheat, with Hindmarsh, Latrobe and Spartacus all recording significant damage.

Barley quality was mixed with a good percentage of loads making Malt grades but there were still a lot of Feed 3 deliveries.

Wheat yields were also below average from frost impact, but not as much as for barley yields. Protein content was anticipated to rise with the reduced yields but this did not occur. Protein was generally low but milling grades were achieved except where frosted grains were found.

Canola was the standout crop in 2016. Canola achieved similar yields to the cereals at about 1.2 t/ha. No one recorded very high yields and the best paddocks achieved 1.5 t/ha. Oil content was very high, at a minimum of 46% and many crops achieved 50%. Canola remains the best bet for profitability in 2017. Provided the season starts with good moisture and continues in April, expect at least a 5% rise in area.

Lupin yields were variable, with frost having a strong impact. Many crops only recorded 1 t/ha in very bulky crops with poor pod set.

Field pea interest has dropped away with best yields of barely 1 t/ha. There may be some take up of chickpeas in 2017.

Oat showed frost damage which was not anticipated because the crop is considered more tolerant to frost compared to cereals. Good crops achieved 3 t/ha but frosted crops had low grain weights and were poor yielding. The poor oat price outlook will likely reduce the area sown in 2017.

Overall, 30 to 70 mm of rain has fallen across the region in late January, and more forecast rain is welcome.

Southern Albany Zone

Harvest is complete with yields generally about or below average. Frosts and waterlogging were significant in reducing crop yields. Unaffected areas were exceptional but there was not enough of it to bring the yields up to above average. Wheat yields averaged 3 to 3.2 t/ha with paddocks ranging from 200 kg/ha to 5 t/ha.

Wheat quality was generally good with frosted grain a problem for some. Protein content was very mixed. For 2017, Mace and Zen will be the main varieties.

Latrobe barley suffered far more frost damage than others with best yields to 3 t/ha and others at 4+ t/ha. Frost and waterlogging again were the problem with yields ranging from 2.5 to 4 t/ha.

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Oats performed poorly where frosted, which was unexpected, but overall yields were very good. With the current price outlook, the area of oats for grain is expected to fall significantly in 2017.

Canola was the standout for yield and oil, though paddock averages were affected by waterlogging and frost.

No rain was recorded in the Great Southern and all along the south coast late January / early February. At this early stage, growers prefer the dry weather.

Esperance Zone

Harvest was completed by most growers before Christmas with a few going into early January. Grain deliveries continued throughout January from on-farm storage. The final production total for Esperance will be 400,000 tonnes higher than forecast in early December. Cereal and canola yields were mostly underestimated with many growers very pleased with their final yields.

Damp weather saw a slow start to harvest, but from mid-November, the weather remained fine though cloudy and harvest pace improved. Many growers did not take a break in five to six weeks to get the harvest completed.

Yields across the board were higher than expected where frost had not had an impact. A lot of grain was lost due to frost but final farm production ended being at least close to the most recent five year average. Frost damage was mostly seen in the Salmon Gums, Grass Patch and Cascades districts. The impact and occurrence of frost was very random, though severe in some cases.

Waterlogging that occurred in the coastal districts throughout the season, reduced production in all crops. Away from the coast, yields and ultimate grain quality was very good.

Canola yields were again exceptional. The early planting opportunity and constant rain was ideal to promote high yields. Oil content was very high at 48 to 50%. For 2017, the area is unlikely to change much as most growers have about the maximum area already sown to canola without risking disease and yield decline.

Wheat yields were above average, grain quality was very good, yet protein was low.

Barley yields were also above average, some frosted crops produced screening and achieved feed grades but the strike for malt quality was above average.

There was around 60 mm of rainfall in the north and east late January / early February. Further rain forecast will provide good soil moisture in the medium and low rainfall districts however it is still early. Some coastal districts will be hoping to remain dry until the season breaks to avoid the impact of constant waterlogging.

Geraldton Zone

Northern Geraldton growers finished harvest in November and most had a very good year. Further south, harvest extended into early January with slow progress required in very heavy crops.

For 2017, it is unlikely much will change although there will be a small swing to more canola if the season provides an early sowing opportunity.

Canola was exceptional in all districts with very high to record yields and very high quality. Many growers recorded 2.3 to 2.4 t/ha averages over very large areas. March sown canola generally performed below that sown in April. The 'sweet' spot for sowing appears to be April 4 to 14 or thereabouts.

The cool winter and spring was critical in achieving the high yields. August maximum temperatures were 4°C below average in Mullewa while they were 4°C above average in 2015. Therein lies the difference in the two seasons.

Delays to nitrogen applications due to late deliveries produced some interesting results. Where applied on time, the nitrogen went to improve yield, while a 10 day delay caused protein rises of about 1.5%.

For 2017, with stored soil moisture and an April start, canola area will rise by at least 10%. A lot of effort is going into nutritional recommendations for cereals to maintain some profitability in the face of poor prices.

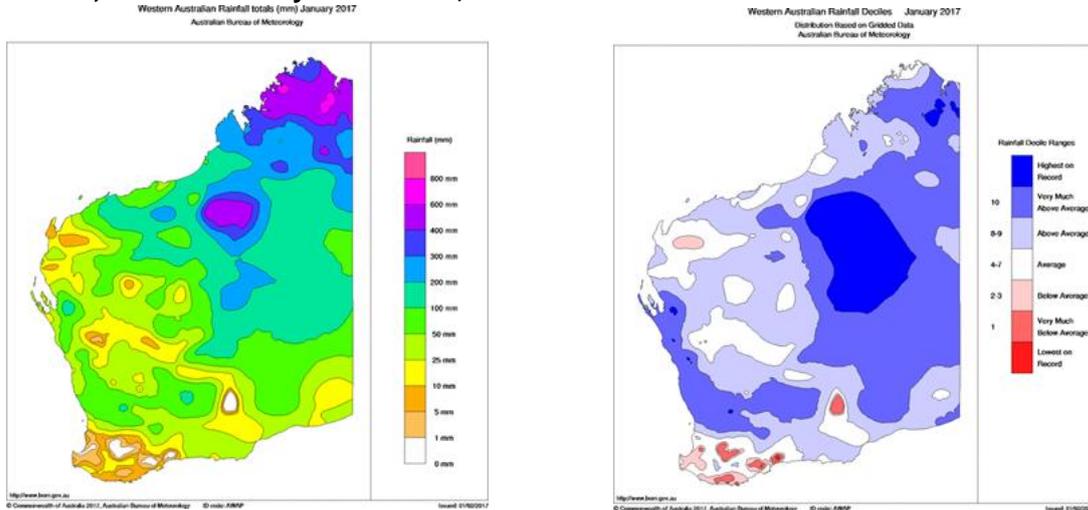
Rain in the late January / early February has varied enormously with most receiving 40 to 80 mm and a few at up to 240 mm. More rain will be very good to boost confidence for 2017.

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Season Outlook

Ian Foster, Grains Industry Directorate, DAFWA



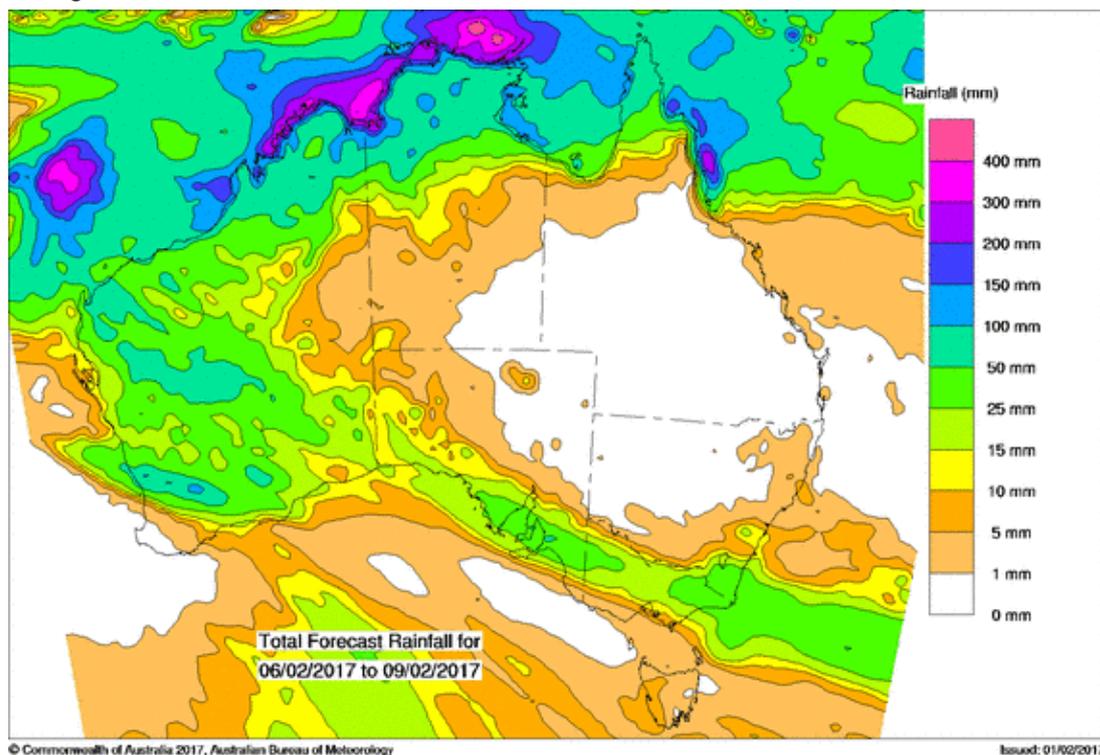
January rainfall across WA: there has been a lot. Refer to the Bureau of Meteorology (BoM) maps pictured above.

As well as causing local flooding, and streamflow, there will be stored soil water. Some of that is likely to remain in deep storage through to the autumn.

At this very early stage, there is some indication from a few of the climate models that the start to winter may be drier than normal. This is for April, and April-June. Confidence in the model projections at this long lead time may be fairly low, but still something to watch for future updates. The next BoM update (March-May period) will be 23 February 2017.

The spring pattern that led to the exceptionally cold September in 2016 is unlikely to reoccur as the forecast weather pattern across the south and south east of Australia will be quite different. Spring is more likely to be 'normal'.

The current pattern of tropical rain looks like it may continue next week and most models are forecasting rain mid-next week.



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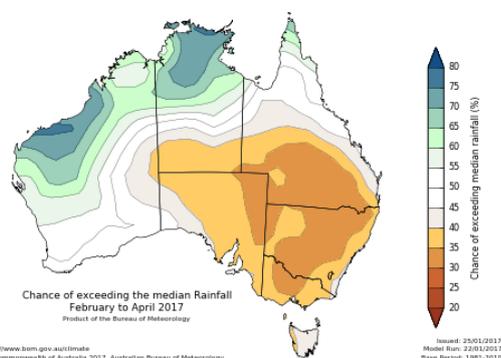
Bureau of Meteorology: 3 month outlook, February to April 2017

Summary

- February to April rainfall is likely to be below average in much of eastern Australia and above average in parts of the northwest and the northern NT.
- February is likely to be drier in parts of the east and wetter over WA and the northern NT.
- Days and nights across eastern Australia are likely to be warmer than average for February to April, with cooler days and nights more likely in northwest Australia.
- Outlooks for the northwest are being driven by tropical activity (such as the north Australian Monsoon and the Madden–Julian Oscillation which is forecast to be active in early February). Further south, forecasts for above average pressure will likely bring clear skies and warmer than average daytime temperatures to parts of the southeast (see the Climate Influences section for more detail).

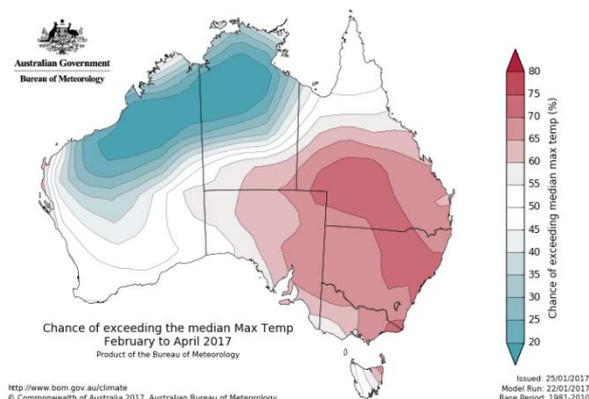
Rainfall

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Additional information can be sourced from:

- [DAFWA: Seasonal Climate Information](#)
- [DAFWA: Potential Yield Calculator](#)
- [BoM: WA Seasonal Rainfall Outlook, next 3 months](#)
- [BoM: Month to date rainfall for WA](#)
- [BoM: Decile rainfall for November 2016 to January 2017](#)
- [WX Maps: 16 day rainfall outlook](#)

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