

Summary

The 2016 Season

The 2016 grain harvest is progressing at a fast pace across the grainbelt with excellent recent weather. The cool weather through late October and early November forced a late start and slow pace to harvest activity. In recent weeks there have been few weather delays and conditions have enabled growers to accelerate progress to the point where the usual Christmas deadline may well be reached by the majority of growers in the Geraldton, Kwinana and Esperance port zones.

The full impact of the series of devastating frosts in September and early October is now clearer to see. Growers in the Lake King, Varley, Hyden Lake Grace, Kondinin and north Merredin districts (among others) have recorded very poor yields of 400 to 600 kg/ha in the most severely affected cereal and canola crops. Damage in the wider area of the eastern Kwinana, southern Geraldton and northern Esperance zones is somewhat less in effect and more sporadic in pattern.

In contrast to these poor results, yields across the grainbelt and in unaffected paddocks have been higher than forecast during spring. Canola yields in particular have been at record levels with the Geraldton port zone recording a remarkable average yield of over 2 t/ha. Many individuals have recorded 3 t/ha and better. Oil content in all regions is excellent at 47 to 50%.

As a consequence, the production tonnage forecast has risen by over 600,000 tonnes from the November forecast. This is still some 3 million tonnes short of the potential seen in early September.

Wheat grain quality is generally meeting milling grades but with lower than average protein due to the high yields. In southern districts, with the effects of frost, protein remains low with higher screenings. Frost affected grain is resulting in more GP and ASW grades being attained. Barley in these districts is a mix of good Malt grade grain or poor grain with high screenings making Feed 2 or Feed 3 grades.

Oat yield and quality is above average in most regions. However, high yields in the lower Albany zone have been tempered by low grain weight. Lupins have recorded excellent yields in the Geraldton zone and will return strong profits to growers. In southern regions, what looked to be bulky lupin crops with few pods now have above average yield potential after the extended cool spring.

Harvest will continue well into January in the lower Albany zone, but the majority of harvest will be complete elsewhere by the New Year.

2016 WA Crop Production December Estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Field pea	State total
Kwinana	4,453,000	1,124,000	751,000	438,000	215,000	11,000	6,992,000
Albany	1,393,000	1,108,000	441,000	299,000	53,000	5,000	3,299,000
Esperance	1,128,000	731,000	433,000	17,000	20,000	20,000	2,349,000
Geraldton	2,116,000	136,000	317,000	12,000	466,000	1,000	3,048,000
Totals	9,090,000	3,099,000	1,942,000	766,000	754,000	37,000	15,688,000
Compared to Nov forecast	0.6%	13.9%	12.2%	0.7%	4.9%	-11.9%	4.5%
Compared to 2015 harvest	-11.9%	0.8%	25.9%	49.3%	66.8%	5.7%	5.9%

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.

Kwinana Zone

The Midlands

Frost effects throughout the Midlands region is more widespread than first thought. Damage appears more severe in wheat than other crops. On the plus side, yields in affected crops are higher than anticipated.

Barley averages are 5 to 6 t/ha without frost, and 2 to 3 t/ha with some frost and some quality issues. Many growers are achieving high percentages of Malt grade.

Canola yields have been exceptionally high with excellent oil percentage. Most averages are over 2 t/ha, even in eastern districts.

Harvest has now moved to wheat with rapid progress in the last two weeks. Yields vary with districts and frost impact. Frosted wheat on sand soils west of Moora with potential for 3.7 t/ha have recorded 2.1 t/ha. Quality to date is good, though with generally low protein.

Lupin yields have been above average despite some frost impact. Yields are around the 2.5 t/ha average with the best lupin crops well over 3 t/ha.

Oat yields and grain quality have been strong. Yields have been 3.5 to 4 t/ha on weak soils to 5.5 t/ha on better classes of soil.

Kwinana East

Final yields in cereals across the eastern Kwinana zone have been disappointing after a promising start to the season. Yields in most districts are slightly above district averages.

Barley yields are low at 1.2 and 1.4 t/ha with wheat at about 1.5 t/ha. Frost has been significant but low spring rainfall has also reduced yield potential.

Yields in the Beacon and Nungarin districts have been disappointing. Frosted crops have produced less than 500 kg/ha and unaffected areas closer to 2 t/ha. Noodle varieties, principally Calingiri and Zen have performed well with most making ANW2 grade for low protein. The current premium will see a bit more noodle planted next year. Further west to Kalannie and Goodlands, it is far better with some wheat crops recording over 3 t/ha.

Canola has been a mixed bag with frosted crop down to 500 kg/ha with low oil. Unaffected crops are at about 1.4 t/ha with good oil at 48%.

Kwinana West

Yields of barley and canola have continued to exceed expectations in most districts. Quality has also been impressive with a high percentage of barley making Malt grades and canola oil content at 48 to 50%. Growers with frosted barley have been blending grain to deliver into higher grades.

Wheat yields have been greatly affected by frost in the central districts of the Kwinana zone. Elsewhere frost has had a more random effect and yields from frosted paddocks have been slightly better than anticipated. Blending to raise average protein levels over 10% has been required in many districts.

Canola yields have been impressive in all districts. The early April sowing and extended cool winter and spring has enabled canola to exceed all expectations for yield. Traditionally, canola yields around 50 to 60% of cereals. In 2016, canola has exceeded cereal yields in a few cases and been close to 90% in others.

Lupin yields are average to better than average. Frosted lupins have recovered due to the cool and extended spring to set pods on third order branches.

Harvest is moving at a good pace after a slow start and the majority of growers will conclude their programs by Christmas with good weather.

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Albany Zone

Lakes region

Good weather is helping harvest to progress at a solid rate after a slow start.

Wheat is yielding around 1.5 t/ha on average across the region which is close to the 10 year average. The five year average is closer to 1.8 t/ha, showing the effect of frosts in a season with very high potential. The effects on individual growers has been devastating but local communities are rallying to push through harvest.

Wheat grain quality is mixed with GP grade for frosted grains common. Protein remains low where yields were cut by frost. Without frosted grain, wheat is making almost every grade available and this will make optimising grain a difficult task. Apart from protein, quality is good with grain size exceptional at 82 to 84 kg/hectolitre.

Barley yields range from 400kg/ha to 4 t/ha with mixed quality. A lot of frost affected barley is just making F3 grade, while the high yielding crops are making Malt grade. Final average yields will be in the range of 1.8 to 2 t/ha. Frosted crops have yielded above forecasts fortunately. Overall, the Malt strike has been higher than usual.

Canola has been the bright light for grains in the Lakes region, with yields of 1.1 to 1.2 t/ha about 300kg less than the potential before frosts. Frosts have cut about 25% of yields. Oil percentages have been good at 48%.

For next year there may be more canola due to enhanced profitability over wheat, and less disease pressure to deal with.

There has been little lupin harvested to date, with reports of yields being low at 0.8 to 0.9 t/ha. Field peas have been poor with yields as low as 200 kg/ha. Once again, frost is the culprit.

Oaten hay yields have been good throughout and those with contracts have profited well. Provided contracts look attractive, the area to oats for hay and grain may increase next year.

Southern Albany Zone

Harvest progress in the lower Albany zone has been slow with canola still the main focus with some barley also being harvested. In severely frosted canola, the oil percentage has been low but the vast majority is producing exceptional quality.

Barley yields have been above average in the absence of frost. La Trobe barley seems to have suffered worse from frost but possibly because it was planted first and became more exposed than other shorter season varieties. 4.5 to 5 t/ha is common with 3 t/ha in frosted areas, more than anticipated in both cases. Bass barley is yielding very well but with some colour issues, which is perplexing as harvest rain has been minimal to date.

Oats are yielding well to around 5 t/ha but with lightweight grain. The cause is somewhat unknown and may be the slight effects of frost or a lack of nutrients to support the high yields.

Lupins have podded very well in late spring to change from high biomass/low yielding to having above average yields. The rotation benefits for 2017 crops will be substantial.

Little wheat has been tested for quality to date but quality defects from frost are expected. Both Calingiri and Zen wheat will yield well for the ANW grade.

Esperance Zone

It remains hard to gauge the overall impact of frost in the wider Esperance region. For example, totally frosted barley crops are bordered by untouched field peas. There seems little rhyme or reason to the impact and effects of frost.

Overall there are far more positive stories than negative ones in the Esperance port zone, yields are above average and the clear weather has facilitated an early finish to growers' programs. Some harvest activity into the New Year will continue with deliveries of grain currently stored on-farm into CBH.

Canola yields are higher than forecast in all districts with excellent oil content at 48% plus. Non-frosted barley is yielding well at 2.5t/ha to 4 t/ha with low protein a common issue. The Malt grade strike appears to be average.

Wheat yields to date have been above average at 2.5 to 3.5 t/ha south of Grass Patch and 1.8 to 2.2 t/ha north to Salmon Gums, in the absence of frost. Frosted wheat is at 1 t/ha to 1.5 t/ha. Quality is mostly good though protein is low with the high yields. Very little AH grade is being attained with ASW and APW most likely.

La Trobe barley seems to have suffered frost damage more so than other varieties but mainly due to being planted earlier and being more exposed.

Geraldton Zone

Harvest is 90 to 95% complete in the northern Geraldton zone and 75 to 80% in southern districts. There have been no delays to harvest through weather in the last few weeks enabling the harvest tempo to hit full steam.

Harvest is likely to be entirely finished by Christmas.

Lupin yields have been excellent, evidenced by the ever expanding stockpiles at the Moonyoonooka CBH site.

Protein in wheat is low, as forecast earlier in the season, with the majority of wheat making ASW and APW grades. Some frost effects have been seen in southern districts with small deliveries of frost affected grains.

Noodle wheat has been a standout with strong yields and a premium over APW making it profitable, encouraging a swing towards noodle varieties in 2017.

Barley yields have been good to well above average. Quality has been good with the majority of barley making Malt grades.

Canola yields have been outstanding in all districts. Canola contributed to the slow progress of harvest with header speeds being exceptionally slow to churn through very heavy crops. The zone average is about 2 t/ha with many yields well in excess of 2.5 t/ha with excellent oil percentages of 47 to 50%.

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Season Outlook

Ian Foster, Grains Industry Directorate, DAFWA

Rainfall in November was generally below average across cropping areas, and provided good conditions for harvest. Spring rainfall (September to November) was also below average, though this was not significant for crop yields given favourable rainfall earlier in the growing season. The main impact on crop yield and quality came from a series of severe frosts in August and September.

Monthly rainfall outlook for December indicates generally below average rainfall for most cropping areas, despite weather forecasts of possible rain around mid-month. Beyond that, relaxation of climate patterns in the Indian and Pacific Oceans back to normal conditions brings mostly neutral seasonal rainfall outlooks for summer (December to February). Sea surface temperatures remain warmer than normal to the north of Australia, and are expected to affect summer rainfall over WA through increased risk of tropical cyclones.

Bureau of Meteorology: 3 month outlook, December 2016 to February 2017

Summary

- Summer (December to February) rainfall is likely to be below average in parts of the east and above average in northwest WA.
- The December outlook shows a drier month with warmer days for most of the country.
- Warmer days and nights are likely across eastern and northern Australia, with cooler days and nights more likely in Tasmania and southwest WA.
- This outlook is strongly influenced by a climate driver called the Southern Annular Mode (also known as SAM). It is expected to be in a negative phase in December. When this happens in summertime, weather systems are further north than usual, meaning Australia experiences higher pressures than normal. This is typically associated with reduced rainfall and higher temperatures. The Pacific Ocean, though in a neutral ENSO phase, is tilting slightly towards La Niña, increasing sea surface temperatures in the western Pacific Ocean, including around northern Australia. This may be raising the likelihood of increased rainfall over northwest WA during summer.

Rainfall

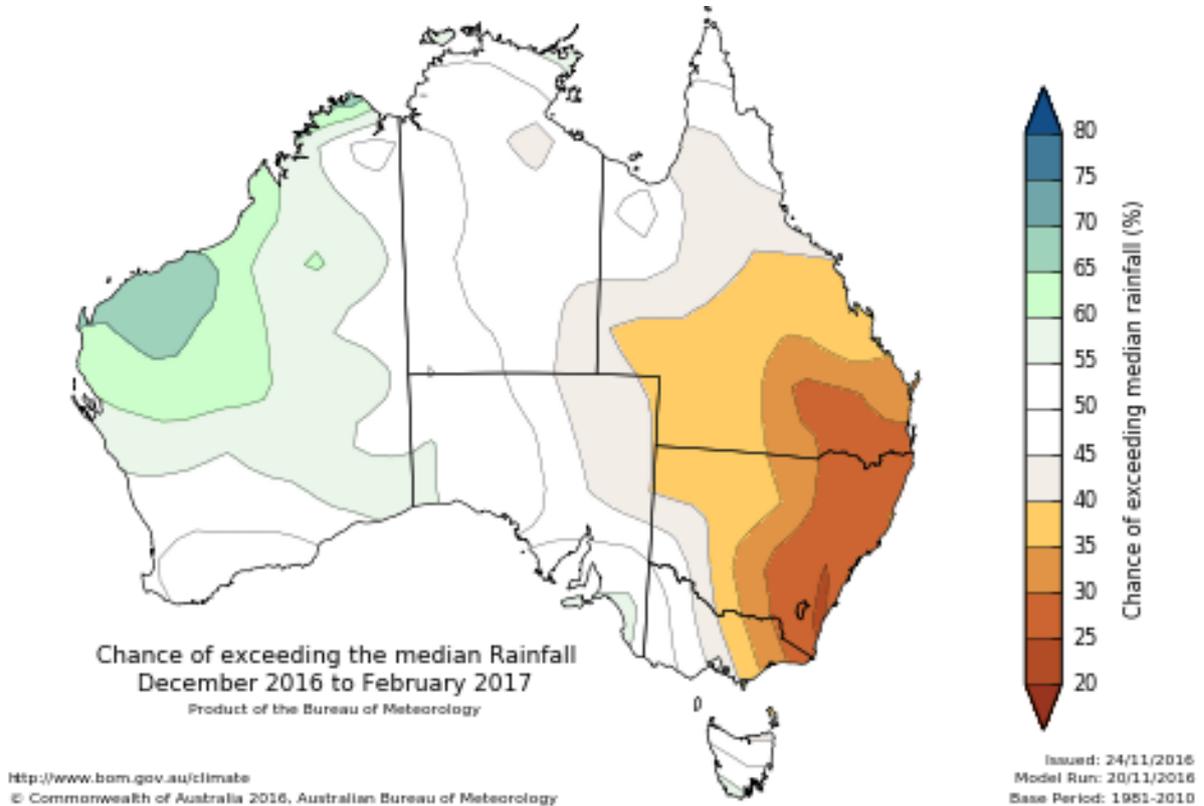
- December is likely to be drier across most of mainland Australia, with a 70 to 80% chance of below average rainfall across most of eastern Australia.
- Summer (December to February) rainfall is likely to be below average across parts of eastern Australia and above average in northwest WA.
- The current outlook reflects a negative Southern Annular Mode.
- Historical outlook accuracy for summer rainfall is moderate to high over most of WA, and moderate over the eastern mainland. Elsewhere, accuracy is low to very low.

Temperature

- Summer (December to February) days and nights are likely to be warmer than average in the east and north of Australia and cooler than average in Tasmania and southwest WA.
- There is a particularly high chance of summer having a warm start for most, with much of Australia likely to see warmer daytime temperatures in December.
- The current outlook reflects a negative Southern Annular Mode and a weak La Niña-like pattern in the Pacific Ocean, including warmer than average waters to the northwest of Australia.

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- Maximum temperature accuracy is moderate over western and eastern parts of Australia and low across central regions and western Tasmania. Minimum temperature accuracy is moderate over most of Australia.



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 Sept to November 2016](#)
- [WX Maps:16 day rainfall outlook](#)

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