

### 2018 Season Update

The majority of the Western Australian grainbelt received little rainfall in September. The grain yield decline from August was gaining momentum and could have been significantly worse if not for the recent storms bringing much needed rain for all but the northern regions. Many crops in the lower rainfall regions in the eastern areas of the state and the Lakes District were either too far along or simply did not have enough growing season rainfall to do more than arrest the yield decline.

The frost events in late August and then the very severe frosts in mid-September have had a significant impact for growers in the worst affected regions and have taken the top off the barley and canola grain yield potential in large areas of the southern grainbelt.

The grain yield decline in the last month from the central and northern regions of the state has been significant although this has been buffered to some extent from for available sub-soil moisture.

Total wheat tonnage is now expected to be greater than in 2017 and well down on what was expected a month ago. Barley tonnage is expected to be similar to 2017 and significantly less than what could have been the case with the extra area planted in the state this year due to the frost events. Canola area was down from 2017 due to the later start and combined with a difficult start for the crop and frost, total tonnage is expected to be nearly 400,000 tonnes less than last year.

The lupin area is well up from 2017 due to the improved conditions in the north of the state and tonnages are expected to be back up to recent levels.

The increase in pulse area this year has taken another hit from the frost particularly for the field peas, although lentils and faba beans have been less affected.

### 2018 GIWA WA Crop Production Estimates October (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Pulses	State total
Kwinana	4,000,000	1,850,000	450,000	285,000	120,000	5,000	6,710,000
Albany	1,400,000	950,000	450,000	230,000	55,000	0	3,085,000
Esperance	1,150,000	600,000	300,000	20,000	50,000	40,000	2,160,000
Geraldton	1,600,000	130,000	220,000	15,000	320,000	2,000	2,287,000
<b>Totals</b>	<b>8,150,000</b>	<b>3,530,000</b>	<b>1,420,000</b>	<b>550,000</b>	<b>545,000</b>	<b>47,000</b>	<b>14,242,000</b>
<b>% Change to Sept 2018</b>	<b>-19.2%</b>	<b>-7.2%</b>	<b>5.3%</b>	<b>25.3%</b>	<b>-5.4%</b>	<b>-14.5%</b>	<b>-12.7%</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.*

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## Geraldton Zone

The top has come off the wheat grain yield potential in the Geraldton Port Zone in the last month due to the very dry conditions in September. Once the warm weather kicked in without follow up rain, the slide in grain yield accelerated, as many predicted it would, due to the crops maturing later than is ideal for the region. The scenario would be worse if not for the amount of subsoil moisture under the crops from rain earlier in the year. Wheat crops have lost on average 15-20% of their grain yield in the last month with crops to the east losing more than this and crops within 80km of the coast losing less. The wheat is well into grain fill with the best areas filling 3 wide and the majority 2 wide. Total grain for the region is predicted to be around 2.3 million tonnes which is 700,000 tonnes more for the region than last year.

Canola seems to have handled the dry conditions better than the cereals with most on the deeper soils still hanging on. Some earlier canola crops have been swathed closer to the coast, and also those on heavier soils and further from the coast getting close to harvest.

Lupin crops are still quite green on the deeper sandplain and will yield between 2.0-2.2 T/Ha which is about average. There has been a high incidence of budworm for the whole of the grain belt this year and in the Geraldton region most lupin and canola crops have required spraying.

The standout agronomic practice for the season has been the growth and ability of crops to hang on in the spring on the deep ripped and ameliorated country. This is not a new practice, although it has been highlighted from the very dry year in 2017. Now with the lack of spring rains and later maturing crops this year, it has contributed to crops better utilizing the “bucket” under them.

## Kwinana Zone

### The Midlands

Crops in the region held on surprisingly well during the dry September and grain yield estimates would have been largely unchanged for this report except for the frost in the middle of the month taking the top off the cereal and canola yields in some areas east and south of Moora. The frost appears to be nowhere near as damaging for the region as in 2016, with estimates of between 5-10% reduction in individual paddock yields in the worst affected areas around Miling/Yerecoin/Piawaning and in the low lying areas around Wongan Hills and Goomalling.

Cereals are well into grain fill with barley crops starting to turn. Cereal grain yields in the central and eastern regions will be at least average and crops in the western areas above average.

Canola grain yield will be below average due to the later start and initially “gappy” establishment. Most are hanging on and are still green, and if the next two weeks remain mild with some showers as predicted, may yield better than they look at the moment. Most canola crops have or will be sprayed for budworm and/or a combination of aphids and diamond back moth.

Lupin crops are well grown with good canopies and at least average grain yield potential.

### Kwinana West

In the West Kwinana Port Zone all crops have above average grain yield potential at this stage of the season. Whilst the region missed out on a month of growing season from the end of May start, the near ideal growing conditions in June and July pushed crops along to be ahead of normal growth stages for a late start date. High grain prices gave growers confidence to ramp up input costs, particularly fungicides and fertiliser, assisting in setting up high yield potential. Crops are well into grain fill and with minimal moisture stress, heat stress and

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little impact from the frost events in September, most growers are quietly confident now that grain quantity, size and quality should be above average.

### **Kwinana East**

The Eastern Kwinana zone is a “hotch potch” of grain yield potential from everything between good to very poor depending on soil type, rotation, crop type and management practices. The “square green clouds” are really starting to show up in the region and many growers are back to average or below average grain yield potential.

The almost perfect growing conditions for June and July have faded with the lack of any significant rainfall in September and the lack of sub-soil moisture for the region has taken a heavy toll on grain yields for the zone.

Conditions are worse in the north and eastern areas of the zone and as you move to the southern areas of the zone it improves to the extent where growers who were not hit as badly by the frosts in September will reach average grain yield potential for their cereals.

Insects in the canola and lupins have kept spray programs busy in the more western areas of the zone. As you move east where the very dry September combined with the likelihood of reduced grain yield from the frosts, growers are questioning if the cost of insect control is worth it. A similar thing happened last year and highlights the challenges of growing break crops in these lower rainfall regions.

### **Albany Zone**

#### **Western Albany**

The West Albany Zone has probably benefited the most of all the zones from the near ideal growing conditions in June and July that enabled crops to bulk up and tolerate the waterlogging better than normal when the rain came in August. The very dry September had less impact in the region than other areas of the state, as crops were able to kick away when it warmed up and utilise the sub-soil moisture. Due to the later start than normal, the crops were behind in growth stage when the severe frosts hit in mid-September, resulting in little damage except in the low lying areas.

Barley and wheat crops look sensational and have above average grain yield potential. Canola crops are in the later stages of flowering and have picked up from the difficult start to the season and even though some are frost affected, most are predicted to reach average grain yields for the region. Lupins are watery ripe and look to have at least average grain yield potential.

The Western Albany oat area was down, being replaced by barley, and many crops have been left to grain instead of hay due to the high price of milling grade oats and rain in the last two weeks. This trend is evident as you move north to the West Kwinana Zone and will result in milling grade oat tonnages exceeding our September predictions.

#### **Southern Albany**

For most of the Southern Albany zone there has been a remarkable turn-around in crop potential from the start of the year with cereal and canola crops on track for at least average grain yields. The late, dry, windy start has limited the ability of crops to reach any records in final yield although it could have been worse for growers in the region if the season had cut out early. The yield potential of crops drops off dramatically as you go west and north of the Stirling Ranges, where there has been well below average rain for the growing season. Combined with frost events in August and September many cereal crops will struggle to yield one tonne per hectare and canola half of this.

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The dry year has benefited crops in the south and western areas of the region from less waterlogging than normal and several light rains recently will contribute to bringing crop yields up. The substitution of barley for canola in the region will contribute to less canola delivered in the Albany port zone this year than in 2017.

The frost events in August and September have taken the top off individual paddock grain yields in the western and southern areas of the zone and there has been a significant impact particularly east towards Jerramungup and north to Borden and Ongerup. Many paddocks in these areas will be well down on grain yield from the frost and dry conditions during the year.

### **Eastern Albany (Lakes Region)**

The northern areas of the Lakes Region are on track for average grain yields in the cereals with wheat in the Kulin area predicted to be around two tonne per hectare and barley slightly more than this. It is a different story south, north and west as a combination of the very dry year and frost impacts will reduce many cereal crops to one tonne or less per hectare. The canola has fared worse, with few crops expected to yield anywhere near this.

The southern regions of the zone have received well below average rainfall for the growing season although recent rains have reduced the slide in crop grain yield potential and those that have been frosted will recover to some extent with late tillers contributing to grain yield. Many growers held off cutting frosted crops for hay, given recent years' experiences where crops yielded more than expected.

The swing to barley in the region will not be realized in tonnes delivered as barley growth was more advanced than wheat when the September frosts hit, resulting in more damage to the barley than the wheat. It also looks like another poor year for canola in the region as the late start, lack of rain, frost and now insects are all contributing to lower yield potential. Lupin crops are short with low biomass, although there are plenty of pods, which will result in most having a high harvest index.

### **Esperance Zone**

The Esperance Port Zone grain production estimates have been reduced slightly from the 2018 September GIWA Crop Report due to the continued slide in grain yield potential in the western and northern areas of the region. The areas north away from the coast around Salmon Gums have remained dry with some frost damage and the crops in western areas around Ravensthorpe continue to be dry and severely affected by the frosts in August and September. Whilst the central areas of the zone are well on track for an average year, the poorer areas will contribute little to total tonnages. The predicted tonnages for the region may go up slightly if the temperatures remain mild and the dry areas receive some more rain.

The coastal areas that were waterlogged during August and the start of September are starting to pick up although most of these areas were too wet for too long to allow crops to reach any heights in grain yield potential. The severe frosts in September in the southern and central grain growing regions of the state were not as bad in the areas around Esperance with most crops receiving minimal damage. The Esperance zone canola tonnage will be down from 2017 due to the poor start not enabling crops to make up enough ground during the growing season.

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## Season Outlook, September 2018

Ian Foster, Department of Primary Industries and Regional Development

### DPIRD Climate Summary

Rainfall in recent months has been something of a roller-coaster, with a wet August being followed by a dry September. Stressed crops have been relieved by widespread rain in early October over central, eastern and southern parts of the grainbelt. Soil moisture storage has improved, as shown in Figure 1. Seasonal rainfall for April to September remains well below normal for south-eastern parts of the grainbelt.

Modelled potential crop yield shows good potential yields over northern and western parts of the central grainbelt. Coastal parts of the South Coast also show improved yield potential. Relatively lower yields are predicted across north-eastern, and southern parts (see Figure 2). This model uses seasonal rainfall only and does not account for temperature or disease impacts.

The seasonal rainfall outlook from DPIRD's statistical model for October to December indicates below average rainfall is more likely for most parts other than the Esperance region. A strong majority of international climate models also have a preference towards drier than normal conditions in this period, with over 80% of models indicating below average seasonal rainfall being more likely.

### Bureau of Meteorology seasonal outlook summary

- The October to December climate outlook, issued 27 September 2018, indicates parts of eastern and southern Australia are likely to be drier than average.
- October shows a strong likelihood of drier conditions across most of the eastern two-thirds of the country, and southwest WA.
- October to December days are very likely to be warmer than average for most of Australia. Nights are also likely to be warmer than average for most of Australia.
- A drier and warmer than average end to the year would mean a low chance of recovery for drought-affected areas of eastern Australia.
- The El Niño-Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) are currently neutral. However, current observations and model outlooks indicate El Niño and a positive IOD could develop in spring.

Additional information can be sourced from:

[DAFWA: Seasonal Climate Information](#)

[DAFWA: Soil Water Tool](#)

[BoM: Seasonal Rainfall Outlook, next 3 months](#)

[BoM: Decile rainfall for July to September 2018](#)

[BoM: Landscape soil water balance](#)

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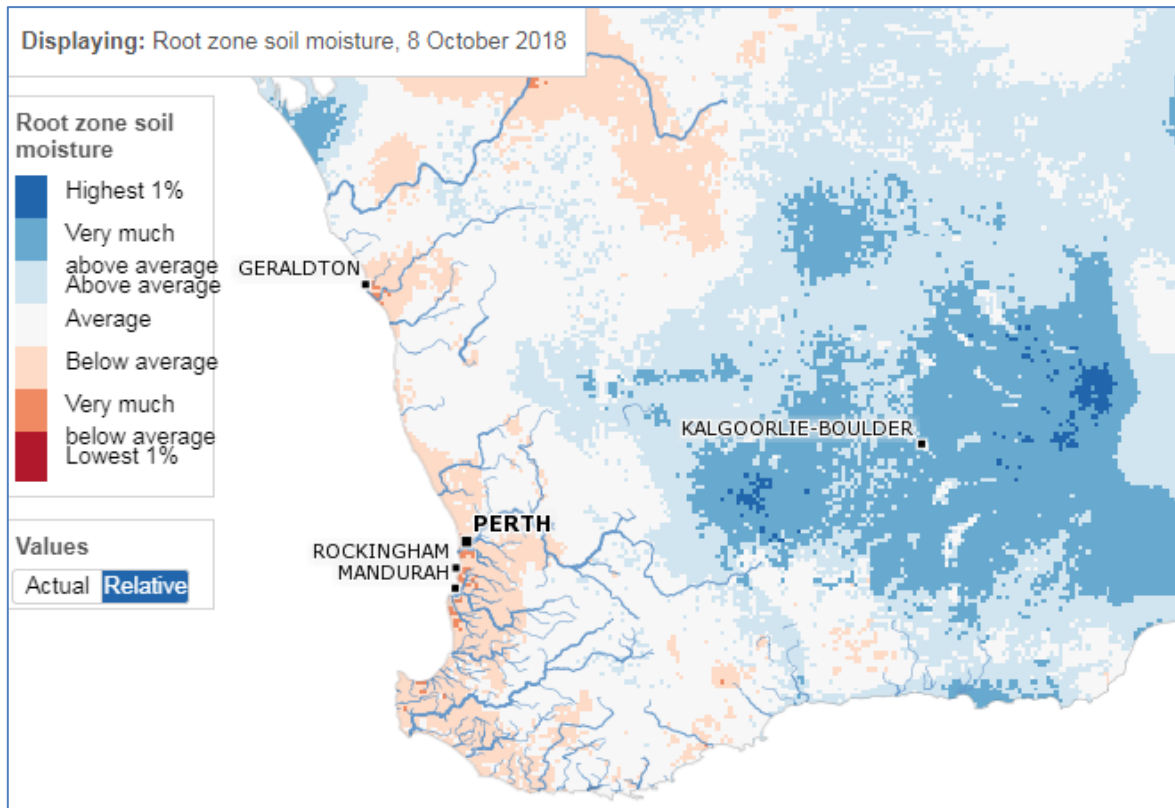


Figure 1. Relative root-zone soil water storage at 8 October 2018. From Bureau of Meteorology Landscape Soil Water model.

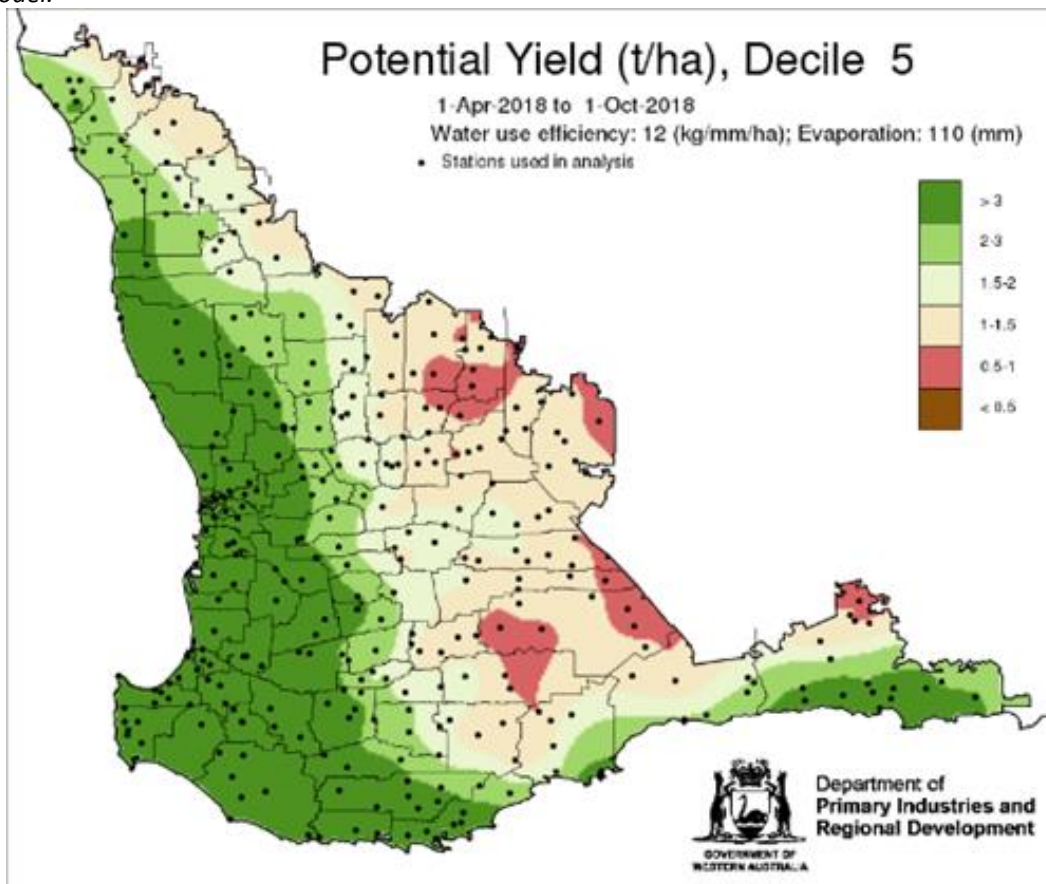


Figure 2. Modelled potential crop yield from DPIRD’s Potential Yield model. This uses total rainfall from 1 April to 30 September 2018. A water use efficiency value of 12 kg/mm/ha is applied.

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