

## The 2019 Season – One of the hardest finishes for a long time

The Western Australian grain season is having one of its hardest finishes in a long time. Surprisingly however, cumulatively the lack of pre-season subsoil moisture, the prolonged dry conditions in spring, and the severe frost events in the southern regions do not appear to have had the dire impact on total grain tonnage estimates feared a few weeks ago. In general, crops have hung on better than expected, considering most regions had little or no rain in September. There has also been some modest recovery in crop yield potential in the regions that experienced the frost events six weeks ago.

The compact growth and lack of biomass in cereals this year looks to have contributed to “saving” some moisture for grain fill. Whilst the “kick” in grain yields from 6-8 weeks ago only looks to be small for those crops harvested to date, this will add up across the state, with total tonnage likely to be higher than most thought prior to harvest commencing. In the western regions where grain yield potential has been expected to be average to above average for most of the year, the dry spring is now starting to show up; these areas will not achieve the yields many had hoped for.

In balance, if the big areas of cereal crops in the medium and low rainfall regions of the state end up going better than expected, this will compensate for the reduction in higher rainfall regions, although most will still be below average. This would mean the total wheat and barley tonnage for WA could exceed 10 million tonnes. This is 30 per cent lower than the near record tonnage in 2018 of just over 15 million tonnes for wheat and barley combined. Considering the late start and difficult growing conditions, this would be an amazing result, clearly demonstrating the industry’s resilience and application of cutting edge water use efficiency technologies.

Canola has hung on longer than expected and for the central and northern regions of the state is behind barley in maturity. Canola tonnage may be higher than current estimates and final tonnage could be closer to one million tonnes. This may occur if the higher than expected returns to date continue as harvest rolls out further south. Lupin crops have podded up well across the state and whilst pod counts point to reasonable yields, much of this may not be captured due to the lack of plant height, which makes harvesting challenging. Oat grain yields and oaten hay yields have been disappointing so far with both below average for regions where harvesting / baling has been carried out.

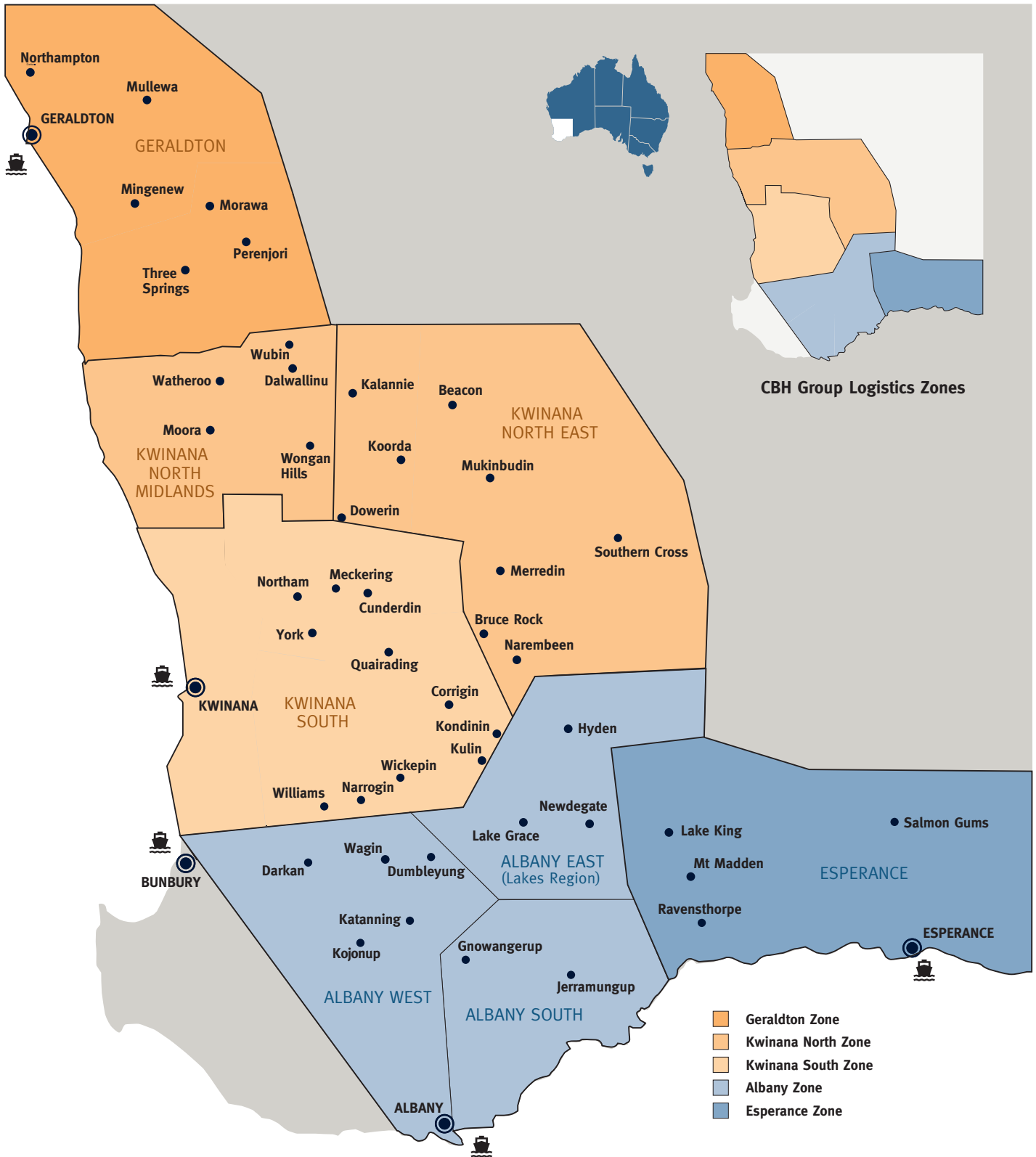
### 2019 GIWA October WA Crop Production Estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Pulses	State total
Kwinana	3,550,000	1,800,000	330,000	180,000	110,000	5,000	<b>5,975,000</b>
Albany	750,000	1,250,000	250,000	190,000	45,000	5,000	<b>2,490,000</b>
Esperance	720,000	900,000	170,000	10,000	15,000	18,888	<b>1,833,888</b>
Geraldton	1,240,000	100,000	130,000	15,000	140,000	4,000	<b>1,629,000</b>
<b>Totals</b>	<b>6,260,000</b>	<b>4,050,000</b>	<b>880,000</b>	<b>395,000</b>	<b>310,000</b>	<b>32,888</b>	<b>11,927,888</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.*

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

# GIWA Crop Report Areas



## Geraldton Zone

Harvesting is underway in the Geraldton Port zone and so far growers are finding grain yields to be a little higher than expected. The better wheat paddock yields are in the 2T/ha range, dropping to the low to mid 1.0T/ha range for soil types at the two ends of the spectrum of very light and very heavy soils. The deep ripped country is once again delivering the goods with many growers commenting that crops “found something” during grain fill and this has resulted in a yield, seed size and protein advantage over the non-deep ripped paddocks.

The barley grain yields so far have been better than expected with some paddocks similar to or not far behind wheat grain yields. Growers reacted to the late season start by substituting planned paddocks of barley to wheat, coming from a perception that wheat has the ability to fill heads better than barley in a hot dry finish. The barley area has been steadily increasing in the north of the state and the yield results so far this year are encouraging for growers. The combination of new, better adapted varieties and soil amelioration, particularly lime application, have changed the outlook for barley in the region.

The late start to the season had canola in full flower in September and most thought the worst, many estimating most paddocks would only see out 500Kg/ha. Grain yields so far are in the range of 800 to 900Kg/ha for the better low rainfall areas and up to 1.5T/ha for the coast. The hybrids are well in front of the open pollinated TT varieties and vindicate the dominance of hybrid canola in the north of the state.

## Kwinana Zone

### Kwinana North Midlands

The Kwinana North East zone is in that transitional area that received some very high individual rainfall events in early winter. These rainfall events leached nutrients, causing deficiencies in the western areas and resulting in a lack of biomass. Cereal head size is large from good growing conditions over the first few weeks following the break to the season. This combination of low tiller numbers, short compact growth and large head size has resulted in the best possible scenario as the season has played out. The crops that have been harvested are generally yielding 10 to 20 per cent better than they look.

In the eastern areas of the zone, crops did not receive the heavy leaching rains. They are still compact due to the tough growing conditions from the lack of rain, displaying very efficient grain fill with water use efficiencies “off the scale”.

Across the region, grain production will be half of last year in the west, and two thirds down in the east.

### Kwinana South

Harvesting is just starting to get underway in the region. Barley has finished quicker than canola and will be harvested first. The growers who still swath canola have started, and wheat will be a few weeks off being ready for harvesting.

The western areas of the Kwinana South zone were holding up well until recently and could have benefited from another rain. Now the top in the yield is coming off and the crops and most will be “average or below average” rather than “average to above average” from a couple of weeks ago. Barley will still be higher yielding than wheat, as per usual. There is more barley sown than wheat in the western areas of the zone and this contributed significantly to the five million tonnes plus of barley produced last year. Total barley production for the state could still be four million tonnes from an increased area

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planted this year compared with 2018. Whilst barley production may be down 20 per cent from last year, average grain yields will be more than 30 per cent down.

The canola area is down slightly in the region, particularly towards the eastern areas of the zone; grain yields will be well down on 2018.

### **Kwinana North East**

The Kwinana North East zone is going to be below average except for those pockets that picked up a few more millimetres from storms in the winter and spring. Some areas in the far east of the zone had more rainfall to work with from pre-season rainfall events and received a little more rain than further west in the spring. These areas will be close to or above average. In general, north of the Great Eastern Highway will not be as good as south of the highway, and some areas east of Merredin will be better than those to the west.

Wheat in particular has hung on much better than most growers thought it would and even though there will be big areas of the zone below average, the zone as a whole will still produce a lot of grain as there are no seriously poor patches.

### **Albany Zone**

#### **Albany West**

The West Albany zone was looking above average until recently although the complete lack of spring rain is starting to hit now, with crops going off very quickly. Many growers have commented that the colour change in crops has been much faster than normal. The earlier sown crops have been in front all year and the spread in yield will be large from those to the majority of crops that emerged following the general break in June.

The canola is in front of the barley in maturity for crops emerging in May and whilst grain yields will be down on last year, grain yield should be in the over 1.5T/ha range.

#### **Albany South**

There has been little crop harvested in the region to date. Some canola and barley are being harvested in the north east areas that had the very dry year. Grain yields are below 500Kg/ha for canola and under 1.5T/ha for barley which is a bit better than expected considering some of these areas were in the lowest recorded percentile of rainfall, as well as being frosted.

Closer to the coast there has been some reprieve from the frost following late rain in early October, although most growers would still be happy if grain yields were close to average. Harvest index for cereals is expected to be good and higher than expected grain yields could result from more efficient grain fill.

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### **Albany East (Lakes Region)**

There will be no surprises in grain yield for the Lakes region. The start to the season was late and rainfall has been below average with no summer rain to provide a reserve. Harvesting barley will commence in about a week. There does not appear to be as much significant damage from the frosts as growers thought because crops were not at their susceptible growth stages when the frosts hit. Grain yields will be higher in the north and western areas of the region as is mostly the case. The eastern areas did pick up some late rain and this will push grain yields closer to average for some growers.

Across the state, it was a very difficult year to manage nitrogen, and this will probably result in higher grain protein. With no summer rain to mineralize soil nitrogen and a late start, crop nutrition management was based around a below average year. When the season did break, the growing conditions were excellent for the first four to six weeks and the fear was crops would “wash out” from going too light with nitrogen. Many growers then fertilized for average grain yields in the region and across the state. In a lot of cases, nitrogen top-ups were a bit late and crops were going yellow and did not tiller or accumulate the biomass they normally would. The result of this has been good head size and below normal plant growth. The season then “cut out” and whilst some paddocks harvested in the north have returned very high screenings, many paddocks are coming in with very good protein and acceptable screenings. The high harvest index of crops harvested to date has in effect conserved moisture for grain fill. For paddocks that don't crash with screenings there is hope that some profit may be made up in protein grades which are more suitable for hard wheat segregations.

### **Esperance Zone**

Now that the full extent of severe frost events have been assessed there has been an increase in expected tonnage on estimates of about 300k tonnes. There has been some recovery in paddocks that were not completely wiped out and have now been cut for hay, following light rainfall in early October. The barley that survived the frost has compensated with grain size as it often does, and the canola and pulses have recovered better than expected.

There will be a large range in individual paddock yields due to the frost, making it very difficult to estimate where final tonnage will end up. As well as this, some of the areas that looked good prior to the frost and then escaped damage, will turn out to be better than good. Closer to the coast there will be some very good yields for barley and canola.

The western areas of the zone received some good rainfall in early October and crops were late enough to benefit them. Some early grain yields are in the 1.5T/ha range rather than below 1.0T/ha as it would have been without that late rainfall event.

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## Season Outlook, October 2019

Ian Foster, Department of Primary Industries and Regional Development

### DPIRD climate summary

Rain for September and October to date has been below average for most of the agricultural region, continuing the pattern of a tight and water-constrained finish to the growing season. Seasonal rain since April remains below average across much of the agricultural area. Soil moisture in the root zone is below normal for most parts the far east. September also saw a sequence of frost events that were followed by some notably warm days.

Weather models are indicating little rainfall for the remainder of October. The Bureau of Meteorology's medium range rainfall outlook indicates November rain is likely to be below normal (see Figure 1). Seasonal rainfall outlooks from Australian and international models indicate November to January rainfall is more likely to be below normal for much southern WA. The strong positive Indian Ocean Dipole event is expected to continue until the onset of the Australian summer monsoon in December. Beyond that, there are signs rainfall probabilities may return to near normal in early 2020.

### Bureau of Meteorology seasonal outlook summary, issued 24 October 2019

- Rainfall is likely to be below average across most of the country during November and December, though November is likely to be wetter in western Tasmania.
- Daytime temperatures are very likely to be above average across Australia for the remainder of 2019 and into early 2020. The exception is in Tasmania where November temperatures are likely to be cooler than average for much of the state.
- Nights are likely to be warmer than average for November except in parts of the southeast. December to February nights overall are likely to be warmer than average nation-wide, increasing summer heatwave risk.
- The strong positive Indian Ocean Dipole (IOD) is continuing to influence Australian climate, while a negative Southern Annular Mode (SAM) is also likely to affect the southern half of the country for the remainder of spring. Both these drivers typically bring warmer and drier conditions to much of the southern mainland during spring.

Additional information can be sourced from:

[DPIRD: Seasonal Climate Information](#)

[DPIRD: Soil Water Tool](#)

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

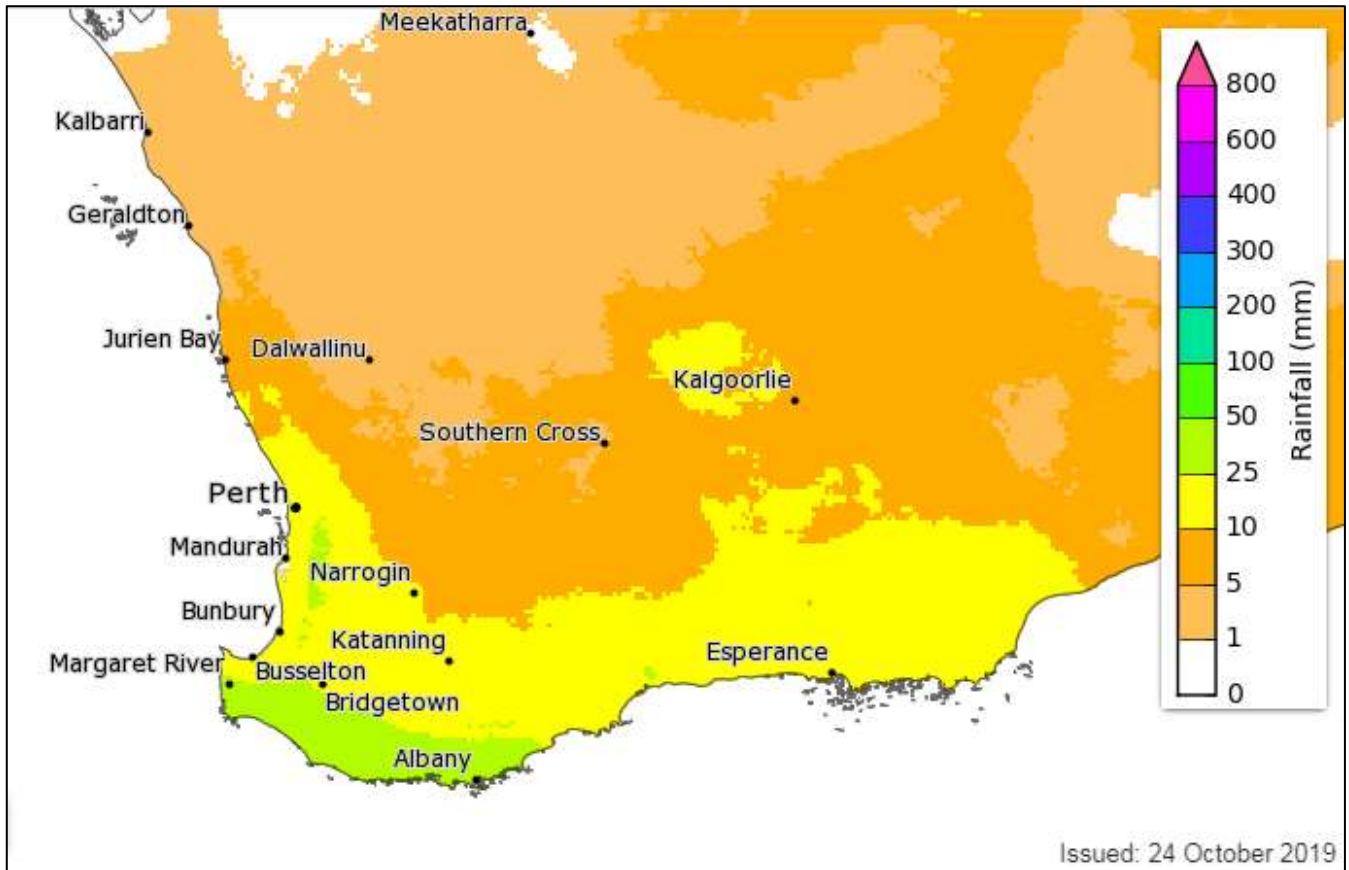
[BoM: Decile rainfall for July to September 2019](#)

[BoM: Seasonal Outlook video](#)

[BoM: Landscape soil water balance](#)

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*Figure 1. Median rainfall predicted for November 2019. This indicates a 50% chance of achieving the amounts shown. The outlook predicts a low chance (around 35%) of exceeding average November rain. From Bureau of Meteorology's multi-week forecast, issued 24 October 2019.*

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