

CROP REPORT

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The 2020 Season – Cool Finish Mitigating Slide in Potential Yields

Harvesting has started in the grainbelt of Western Australia in the last few days in some early wheat and lupin crops in the north east of the state, and early barley crops in the central and eastern areas. With no rain forecast over the next few weeks, harvest will gear up in earnest with the next spell of warm weather.

The lack of spring rain for the majority of the state has resulted in most crops being unable to fill the excellent potential shown earlier in the season. The slide in potential grain yield has been substantial over the last month with even the high rainfall regions going backwards. Coolish September conditions have helped arrest some of the slide in yield although there simply has not been enough retained sub-soil moisture or rain during the year for crops to perform without spring rain. In saying this, close inspection of cereal crops is indicating that most will yield more than expected, and in select specific locations cereal crops will perform above average.

It is too early to make a call on grain quality although there are expectations of high screenings in barley and less so in wheat. Cool spring conditions appeared to have allowed wheat crops preferentially to fill the bottom half of heads due to the “slow” burn off, rather than a “quick” burn off from heat where all grains in the heads tend to pinch up and result in high screenings.

Lupin crops have grown exceptionally well and most will yield above average. Expectations are that canola crop quality will vary. Even though the majority of canola plantings are in the medium to high rainfall areas, it is only in the southern and south western regions where above average yields are expected.

The increase in oat plantings this year is not going to result in excess supply as was anticipated earlier in the season. More oats than planned was cut for hay to hit tonnage targets as yields were down. Oats for grain is only expected to be average, except for the south west coastal regions.

Across the state whilst there are some very poor areas, and areas that usually contribute reasonable tonnages will be down, the total slide in production will not be as dramatic as we thought in September.

2020 Season GIWA October Western Australia Crop Production Estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Pulses	State total
Kwinana	3,600,000	1,100,000	375,000	180,000	200,000	5,000	5,460,000
Albany	1,050,000	1,400,000	420,000	340,000	70,000	20,000	3,300,000
Esperance	1,100,000	740,000	260,000	20,000	40,000	50,000	2,210,000
Geraldton	1,650,000	50,000	160,000	5,000	150,000	2,000	2,017,000
Totals	7,400,000	3,290,000	1,215,000	545,000	460,000	77,000	12,987,000
% change from Sept	-12.4%	-9.6%	-8%	-9.9%	9.5%	6.9%	-10.5%

Note: 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

Crops north of the Tenindewa line on the good sandplain are going to be average with small areas of the better managed country yielding above average. The west coastal regions in a line from Mingenew to Three Springs is good although grain yield potential drops away dramatically west of Carnamah and Coorow across to Eneabba. The coolish finish has allowed crops to dig deep for moisture and finish better than expected. The Chapman Valley has been in a sweet spot all year and there are some excellent wheat crops north and east of Geraldton.

Crops fall away in the eastern areas on the heavier soils and some in the south eastern portions of the zone are going to be very poor. Cereal screenings are likely to be a problem on the heavier soils in the region and particularly in the east and south eastern areas.

There have been some early deliveries of lupins and wheat, although lupins and canola on the deeper soils are still a way off and will need a blast of warm weather to finish before harvesting. The lupins and canola in particular have hung on very well and grain yields are going to be above average on the deep ripped country and where they were sown on wide rows. Some crops that required re-sowing and were then late sown due to early wind damage will be well below the better earlier established crops.

Wheat crops have handled the conditions well this year and grain quality is expected to be average, with early deliveries holding up for screenings on the deeper soils. There is more wheat in the zone than previous years, with reduced area to lupin, canola and barley. We expect the Geraldton wheat, lupin and canola tonnages in this report to be at the bottom end of estimates; all three could exceed these figures.

Kwinana Zone

Kwinana North Midlands

The region has had a very low decile year for rain which has reduced the impact on nutrient leaching in the western regions of the zone. In the remainder of the zone, except for some strips that received summer rain, the crops have survived on small “just in time” rainfall events throughout the season. The cool finish has helped crops to fill and for most crops recent estimates of potential grain yield are looking more positive beyond the first glance.

Closer inspection of cereals is indicating that grain yields will be better than they look “from the road”. Whilst “nothing is going to go as well as it looked” earlier in the growing season, the grain yield slide will not be as dramatic as feared from the complete lack of finishing rains.

The hay crops in the region yielded half to two thirds of a tonne more than expected and expectations are that crops may do the same.

The wheat crops have lost up to 30-40% of potential sites for seed set, although what’s left is filling better than expected. The cool conditions have allowed crops to suck every drop of moisture out of the profile and convert that moisture into grain. There will be significant differences in variety yields as any that were setting potential earlier in the spring have “over-estimated” the season and tried to fill too many sites. These varieties have been unable to pull back on potential. It is expected the earlier maturing varieties will not yield as well and have higher screenings than the later maturing varieties.

The reduced barley plantings in the region will yield slightly higher than wheat. This will be the case over most of the grainbelt, rather than barley yielding well above wheat which is usually the case in the central

and southern regions of the state. Barley for malt is also expected to be down by to 30-40% of deliveries, or about half of what would normally make malt grades.

Lupins are very good with some of the better crops likely to yield 1.5T/ha or more. Canola is mixed depending on where you are in the zone. In the east and central regions the canola yields are going to be below average with the western areas generally above average.

Kwinana South

Harvest will get underway in the next week to ten days. Some areas of the zone had up to 10mm of rain in September and it is surprising what a difference that has made to the crops struggling for moisture. The recent cool temperatures have been a saving grace and have allowed the wheat in particular to finish better than expected considering the growing season rainfall.

The majority of crops have hayed off prematurely with barley crops going white and the heads in many cases not fully emerging from the boot. Wheat crops have gone a pastel grey/green colour with white tips over the last few weeks and in the western regions of the zone have lost a lot of potential yield. The poor north/south centre strip of the region that has been down on rainfall all year is going to be well down on average yields. An indication as to the severity of the finish is that some of the first grain deliveries in the state are in this Kwinana South area, rather than in the north-south progression as in a “normal” year.

Even though there are good areas to the east and reasonable areas to the west, total tonnage for the zone is going to be significantly affected. The worst hit areas could be 50% down on average yields and this is in the more historically reliable rainfall zones.

On the bright side, lupin yields will be good as they will be across the state, revelling in the warm winter growing conditions.

Canola crops have been hanging in there over the last few weeks, although many now have the top third of the podded area now very light on for grain fill. As often happens when canola yields look to be on the low end of expectations, growers tend to back off on input costs and this has been the case this year with many potential sub-one tonne crops not sprayed for late aphid infection. The yield loss from late aphid, diamondback moth or budworm infection can strip a third of the final potential yield off an already stressed canola crop, as these pests tend to “go to town” on stressed crops.

Kwinana North East

There will be areas in the Kwinana North East region that will be outstanding and others that will be terrible, it all comes back to the summer rain and available sub-soil moisture at the beginning of the season. Areas that received summer rain and had resulting stored moisture will be well above average. Growers in a line from Kirwan bin to Koorda, Trayning, Nungarin, Merredin and down to Muntadgin will harvest above average crops. Due to the large area and potential yield of these crops there is going to be more grain from this zone than there has been in the last few years.

On the downside, the cut off in potential yields is pretty dramatic south west and north of this line that received the summer rain. The tail off east is quite dramatic, including to the east of Burracoppin where there has been less rainfall all year. The far eastern areas from Marvel Loch north to Southern Cross, up to Bullfinch and west to Bonnie Rock are very poor and will be well down on average yields.

The extra grain likely to come out of the better portions of region will to some degree make up for the well below expected grain yields in the central regions of the Kwinana zone.

Albany Zone

Albany West

Harvest looks to be on track to start at a similar time to 2019. Crops have hayed off very quickly which will take some of the top end grain yield potential from the better crops. Most growers in the zone are expecting an above average year even with the lack of spring rain. There are a few poorer holes in the region around Darkan and West Arthur, although for the most part the region will be above average for all grains.

These southern areas have not had the warm weather from further north and have been able to use every drop of rain that has fallen this year. As will be the case for most of the state, plant breeding technologies are performing and water use efficiencies (WUE) will be off the charts. In this region there was a lack of waterlogging and many crops established earlier than normal so have been able to utilise the full growing season.

Growers will start swathing canola next week and most barley crops are getting close to 30% moisture.

A late frost that has damaged crops further south seems to have done minimal damage in this region.

The faba bean crops in the region have performed well again, and whilst most growers would admit they haven't "nailed" growing beans just yet, the combination of good soil type selection, higher yielding varieties, with better disease tolerance and better understanding of their growing requirements, means we expect to see more beans grown in the region in the future.

Albany South

Crop outlook was improving in the region as the season progressed from the scratchy start until recently when an unexpected frost has taken the top off many crops in the South Stirlings region. The "freezing fog" as some have described it, has had a substantial impact on individual paddocks. We estimate the reduction in total grain production from the frost event is likely to be less than 5%.

The region had a very difficult start with patchy rain until a few decent winter fronts arrived in July. The variable emergence of crops is going to limit the top end grain yield potential, as is the lack of substantial sub-soil moisture. Crops have been hanging onto the sub 5mm rainfall events all spring with the cool conditions allowing them to make some use of these light rainfall events.

In general, most crops could end up close to average, rather than above average.

Albany East (Lakes Region)

The Lakes district will have a return to average yields for most areas in the region this year except for some very poor areas south and east of Lake Grace, and north east between Hyden and Lake Grace, particularly on the heavy country. The region has suffered through several poor years due to lack of rain and frost and whilst the good start will not be fully realized due to the season cutting out, most crops seemed to have set enough potential earlier in the growing season to reach average grain yields.

The cereals look like they will yield better than they look, or will yield what growers expect given the rain that has fallen. There are more tillers with more sites to fill than normally anticipated in a dry finish. The

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contribution to yield from tillers is going to be significant due to the slow “cut off”. Normally these tillers would amount to very little and be left with fewer heads to carry the weight.

Lupins in the region appear to be average with some height for a change. Canola is expected to yield better than it has for the past three years. The yield range for lupins and canola will around 0.8T/ha to 1.0T/ha for most areas.

Esperance Zone

The Esperance Port Zone will be well up on 2019’s deliveries of less than 2M tonnes. The contribution from the western areas from Lake King down to Ravensthorpe and a return to closer to average yields in the central portions of the zone will mean total production could be up by more than half a million tonnes from 2019.

The northern areas around Salmon Gums and north of Beaumont are going to be well below average due to a poor start and it being dry all year. The central Esperance zone had a very scratchy start although it has continued to improve with most areas receiving good falls of rain in August which has evened crops out. The coast has been dryer than normal and has suffered less from waterlogging than it usually does. This will keep average paddock yields up.

The western strip of the zone received the tail end of the summer storms and whilst it has tightened up recently, crop grain yield potential is very good. Further south around Ravensthorpe, West River and south closer to the coast, crops are generally going to be above average. There are some spots to the south west bordering on the West Albany zone that had a late start and whilst crops have picked up, grain yields will be below average.

Insects have been a problem all year with diamondback moth, aphids and budworm active during the whole growing season.



Season Outlook, October 2020

Ian Foster, Department of Primary Industries and Regional Development

DPIRD climate summary

Seasonal rain since April has been below average for a region running from the Mid-West, through the central agricultural area and into the Lakes district. September rain finished up below average for much of this region, with only the South West and western parts of the Great Southern receiving average rain. The eastern South Coast received little rain. October may also struggle to make average rain across most cropping areas.

Modelled soil water storage in early October (Figure 1) shows the results of seasonal rain and simulated crop water usage, with large parts of north-eastern, central and eastern agricultural areas sitting on small amounts of soil water. This is an expansion of area since September. Seasonal temperatures to date have been 1 to 2 degrees Celsius above average and are likely to have accelerated crop development.

Seasonal rainfall outlooks from the Bureau of Meteorology and international models are shifting to wetter rainfall probabilities for WA for November to January, compared with October to December. This is most likely the influence of the current La Nina event in the Pacific Ocean. DPIRD's statistical model has a drier than normal outlook for October and November 2020, based on September global climate.

Bureau of Meteorology seasonal outlook summary, issued 8 October 2020

- November to January is likely to see above average rainfall across nearly all of Australia, except west coast Tasmania.
- Days during November to January are likely to be warmer than average for parts of the northern and western coastal fringe, and across parts of south-east Australia.
- Nights during November to January are very likely to be warmer than average across nearly all of Australia.
- The Bureau's ENSO Outlook is at La Niña, meaning La Niña is underway in the tropical Pacific.
- The Indian Ocean Dipole (IOD) index value is currently neutral, though models suggest negative values may return in October and persist in November.
- La Niña and a negative IOD typically increase the likelihood of above average rainfall across much of Australia during spring and early summer.

Additional information is available from:

[DPIRD: Seasonal Climate Information](#)

[DPIRD: Soil Water Tool](#)

[BoM: Seasonal Rainfall Outlook - weeks, months and seasons.](#)

[BoM: Decile rainfall for April to September 2020](#)

[BoM: Seasonal Outlook video](#)

[BoM: Landscape soil water balance](#)

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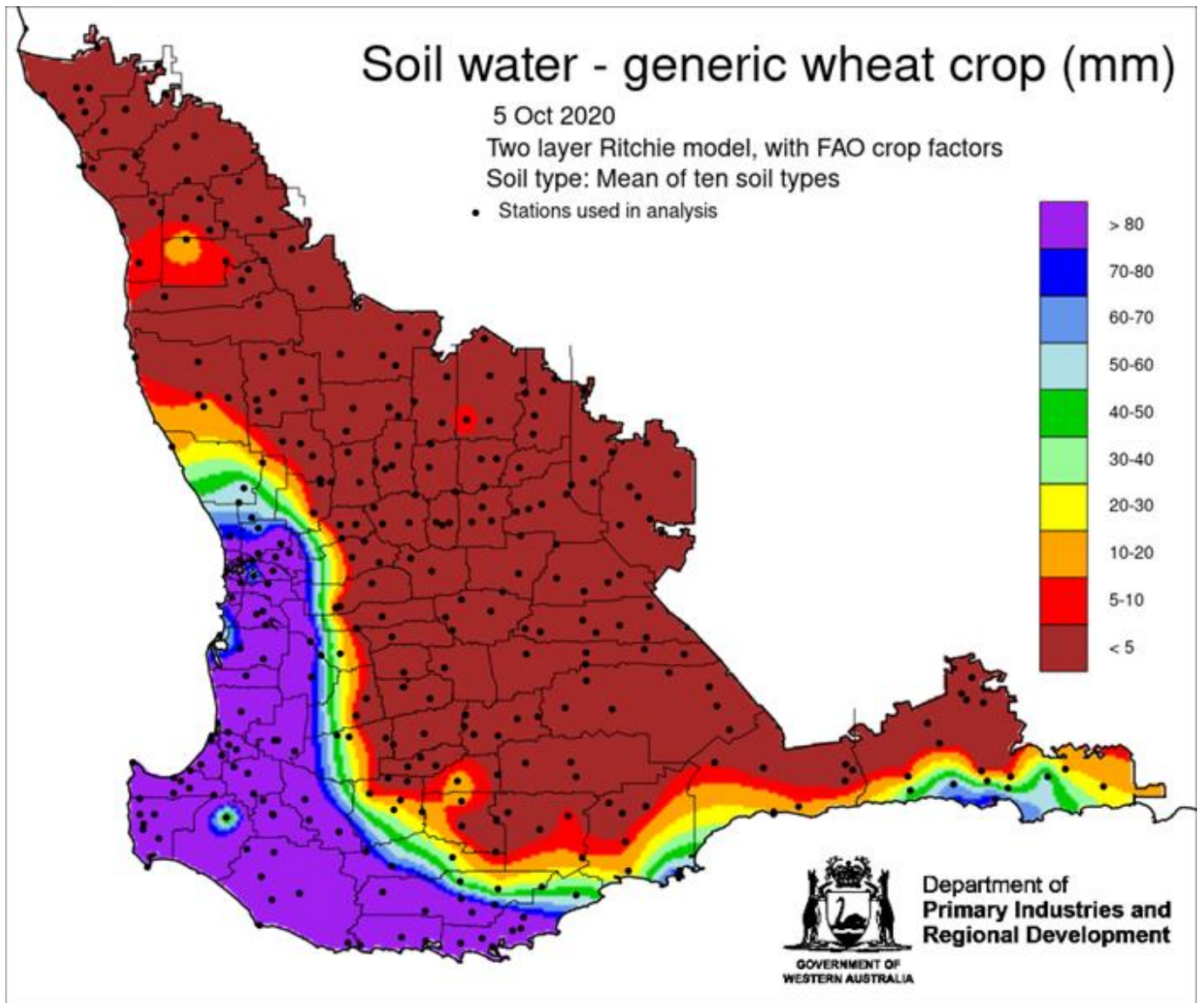


Figure 1. Estimated soil water storage for the average of 10 typical soil types and assuming a standardised crop water usage. This uses seasonal rainfall until 5 October 2020. From Department of Primary Industries and Regional Development.

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