

The 2020 Season – Potential still there, need moisture in the bank

The 2020 grain growing season is finally starting to look like it has the potential to return at least an average harvest. Whilst it is too early to make a call on tonnages, in most regions crops have made up ground from the warm winter conditions to date and are at growth stages similar to a traditional mid to late May break. The question that everyone is asking is, "will the rain keep on falling"?

Crops in most areas of the grain growing regions have been living "hand to mouth" with rainfall events, and many have had only one event of greater than 10mm. There is little sub-soil moisture and crops will crash in the spring if there are not decent falls of rain over the next month.

Grain yield potential is above average in much of the north of the state, the central western rim, the south west and the eastern corridor north and south of Merredin down to Hyden and in the north western Lakes district. Crops in the west coastal regions north of Perth, the central midlands down to the central Kwinana zone, the whole south coast and the majority of the Esperance port zone are mostly below average due to very low soil moisture reserves, uneven plant establishment and later emergence of crops.

The season to date has been dominated by the very strong high-pressure systems resulting in severe north / south wind events and scattered rain rather than good soaking falls when the cold fronts hit the west coast. The traditional fundamentals of warm sea surface temperatures and other indicators have been completely overridden by these high-pressure systems. It has made it very difficult for growers to implement cropping programs as most predictions of good rainfall events have fallen away to either nothing or very little of value.

There have not been any major changes to crop area estimates from last month other than some slight readjustment in wheat / barley / oat ratios for some regions following the implementation of barley tariffs to China. The oat area has dropped slightly with growers intending to substitute oat for barley ending up going to wheat.

Port zone	Wheat	Barley	Canola	Oat	Lupins	Pulses	State total
Kwinana	2,650,000	550,000	480,000	265,000	120,000	10,000	4,075,000
Albany	470,000	700,000	270,000	200,000	40,000	10,000	1,690,000
Esperance	490,000	340,000	210,000	10,000	35,000	45,000	1,105,000
Geraldton	1,320,000	30,000	140,000	10,000	110,000	4,000	1,614,000
Totals	4,930,000	1,620,000	1,100,000	485,000	280,000	69,000	8,484,000

GIWA July 2020 Crop Area Estimates (hectares)

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.

Geraldton Zone

The warm sunny days during the last month have pushed crops along and most have caught up to where they would normally be for this time of the year. Crops are in front of where they have been for the last couple of years and with no leaching rains, have resulted in very high nitrogen use efficiencies to date. There has only been one two-digit rainfall event for most growers and whilst crops look like they have above average grain yield potential, the bucket is almost empty. A lot of nitrogen was put out in front of the last anticipated rainfall that did not eventuate.

Weed control has been tricky as the lack of soaking rains has resulted in staggered germinations of radish, ryegrass and brome grass. The non-wetting country close to the coast has both staggered crop and weed germinations that will limit top end grain yield. The crop grain yield potential also falls away in southern areas of the zone on the heavier country.

Most of the wind-blown country has been either re-sown or crops have come through in high enough numbers for adequate cover. Whist there has been some adjustment in crop areas with the re-sowing that was required following the wind blow late May, the area is not significant and the crop area mix for the zone has been left unchanged from last month.

Kwinana Zone

Kwinana North Midlands

Crops across the zone at the moment look better than they have for the last couple of years. The rainfall has been variable as it has for most of the State and some areas are better than others. The non-wetting sand and gravel country has patchy germinations from the combination of wind blow and the lack of a good soak to wet up the profile. The coastal country where crops have emerged evenly generally struggle through winter from leaching rains, however they look good for this time of the year. The nitrogen use efficiency in these areas has been exceptional.

The central regions of the zone have no sub-soil moisture reserves and whilst they still have above average grain yield potential, they are just starting to stress from the lack of rain and the next predicted rainfall event in a weeks' time will be critical to keep them on track. The eastern areas of the zone are generally in good shape particularly for those growers that have some moisture reserves from storms earlier in the year. The far eastern regions of the zone missed out completely on the last couple of rainfall events. These areas are now at the tipping point of the season where grain yield potential will fall away quickly without rain over the next few weeks.

Disease and insect pressure have been low although diamondback moth in canola has needed spraying as per further north, and budworm has also needed spraying which is very unusual for this time of the year.

There has been no major change to crop areas this month except for a slight decrease in the oat area where the late swap out of barley for the malt growers went mostly to wheat. The lack of available oat seed put a cap on the adjustment from barley to oat. The drop in barley area ended up being around 20 to 30 per cent in the western areas and 10 to 15 per cent in the central areas. The eastern areas had mostly finished sowing barley and the adjustment was less than 5 per cent. The adjustment from barley to wheat was greater than 90 per cent in the central areas and around 75 per cent to wheat in the western areas. The remainder in area went to oat and was mostly taken up by the dedicated hay growers and to a lesser extent for grain.

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Kwinana South

Most of the zone is looking for a bit of rain. The eastern areas are in good shape and for some growers the best it has been at this time of the year for a long while. The crop growth has been exceptional from the warm temperatures in June and this has dried out the soil profile to an extent where rain is now needed to keep the grain yield potential up. The recent cooler conditions have slowed things down a little and as for most of the state the next rain event will be critical. The central strip in the zone has been very light on for rain and some growers have not cracked 50mm for the calendar year. Crops in this strip have below average grain yield potential and many have also suffered from the severe wind event that occurred a few weeks ago.

The western areas are looking good and whilst they lack enough moisture in the soil profile to achieve above average grain yield at the moment, most crops are set up for at least average yields if rain keeps coming.

A lot of nitrogen went out prior to the last predicted rainfall event in the zone and the lack of rain that actually fell has a few growers nervous that they may have over cooked crops if the season cuts out.

Disease levels are very low for this time of the year and spot type net blotch in barley, and yellow spot in wheat, has only just got going in the last two weeks.

The final wash up of the introduction of barley tariffs to China is estimated at a 10 to 15 per cent swing out of barley to wheat, with a small percentage going to oat in the western areas.

Kwinana North East

Crops in the zone range from exceptional in a strip north of Merredin up to Trayning and south to Hyden to below average on the eastern edges of the zone. For growers in areas where there was summer rain, the reserves of soil moisture will nearly guarantee above average grain yields.

Most areas of the zone have crops up and have established well although the north eastern edges of the zone in particular, have had very little rain and the crops look "better than they should" for the rain that has fallen. These areas still need a good soak to have a chance of reaching average grain yield. The far eastern regions have had a good start although these areas have missed out on the last few rain events.

The cool conditions have slowed crop growth down and there is still time in the next month for crops to benefit from more rain.

Albany Zone

Albany West

The zone is in really good shape. The drier season to date has limited waterlogging in susceptible areas of paddocks which can push whole paddock grain yield averages down. Crops got away early and are now mostly well grown with plenty of tillers on the cereals and reasonable bulk on the canola. The region will still need an average finish to achieve the potential above average grain yields most crops have at the moment. Nitrogen use efficiency has been very good from the lack of leaching rains and growers are now waiting to see how the season pans out before topping up.

Growers have been using soil wetters for a while to assist in getting crops up from light rainfall events early in the season. In the past, growers had held off for a good rainfall event to sow. There has also been more use of shallow ploughing to mix up the non-wetting soil in recent years and the combination of this along with soil wetters, has resulted in more crop going in earlier. This noticeable change in grower

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practice has resulted in crops being able to better cope with waterlogging and set up crops for very high potential grain yields.

Of real concern for the region, and most of the southern zones, is the lack of surface run-off to fill dams in the last few years. Many growers are already concerned there will not be enough water for stock this summer.

Albany South

The region has a massive range in crop establishment and growth stages within paddocks and across paddocks. The region is well down on rainfall and the rainfall that has fallen has been light. There are still areas in paddocks with non-wetting soil where the crops have not germinated. The rainfall drops away in the eastern portions of the region to an extent where crop grain yield potential is well below average for this time of the year.

There is a large area bordering on the south western Esperance port zone, the southern Lakes region and the eastern south Albany zone that has had very little rainfall and whilst crops are up, most will need very good rainfall events for the rest of the winter to achieve average grain yields. This area has suffered from wind blow again this year and crop establishment has been below average in a lot of cases.

Crops that went in early and got up in May are 5 to 10 days earlier in growth stage due to the warm growing conditions. This is earlier than growers would like and means frost risk in the spring is more likely.

The variability in crop growth has made it very difficult for weed control and crop nutrition management. The canola has not "cabbaged" up to a level to give it a chance to hit top end grain yield and many of the canola crops are down in plant numbers from the light rainfall and wind blow. The wind blow pushed right across to the western areas which is unusual for this area.

The dam water situation is now desperate for most of the southern regions with dry soil profiles and virtually no run-off for the year so far. It is going to take some good sustained falls of rain for the situation to improve.

Albany East (Lakes Region)

The region is still on track for at least average grain yields from the good start and for most of the region, reasonable soil moisture reserves. Growers in central and northern areas of the zone received around 40mm of rain in June. The rainfall so far, combined with the warm weather has kept crops growing and has pushed grain yield potential to above average for those growers. However, the rainfall events have been less in the south of the region and crops south of Lake Grace now need rain to keep crop growth on track for reasonable grain yields.

The crop establishment has been variable with those going in early in excellent condition where the rain was adequate to get them up, but in other areas very patchy. The later sown crops are generally very good and have made up ground from the warm growing conditions.

Disease levels are low and weed control has been good.

Most growers are waiting to see how the season progresses before committing to applying more fertilizer. Rain in the next few weeks will be critical in setting up crops for a good finish.



Esperance Zone

The crop yield potential in the Esperance port zone is very mixed. Western areas are in better shape than they have been for the last few years, although there are pockets within this area close to the coast and in the south west on the borders of the Albany port zone that have had very little rain. Moving east in the zone there are some very dry areas around Cascades that only just received their first double digit rainfall event for the year in the last few weeks. The central regions are down on rainfall, and in the north whilst it had a good start, more rain is needed to keep crops growing. The eastern areas mostly have reasonable crop growth with a lack of any waterlogging to date in coastal areas which can affect yield potential, although growers there are now looking for rain to keep crops ticking along. The far eastern areas in the Beaumont region and north have had very little rainfall to date.

There is a large range in crop yield potential from variable establishment on the sandplain country due to not receiving enough rain to wet up the profile sufficiently, wind blow and a late start. The heavier mallee soils were drying up prior to the rain last week and will need some decent rain in the next month to achieve average grain yields.

Crops have been living from one rainfall event to another and the whole zone, except for the north western regions has had a tough start to the growing season.

Changes in crop area estimates for the zone from last month have been minimal with most of the reduction in barley area going to wheat as was planned in early June.





Season Outlook, July 2020 Ian Foster, Department of Primary Industries and Regional Development

DPIRD climate summary

Seasonal rain since April has been below average, despite some models indicating wetter than normal conditions were more likely. Rainfall for June itself was below average for much of the cropping region. South Coastal areas are entering their third winter with low levels of surface and soil water availability. Modelled soil water storage in early July has shown improvement across northern cropping areas, although low availability remains for the South Coast. A significant high temperature event on 5th July will have accelerated crop development and water use across northern and eastern cropping areas. Potential crop yield modelling based on rain to date and assuming an average finish to the season indicates relatively lower yields for much of the north-eastern, central and southern cropping areas (Figure 1).

Seasonal rainfall outlooks from the Bureau of Meteorology and other models have a spread of rainfall probabilities for southern WA for August to October. The Bureau's model has a neutral outlook for much of the cropping region.

Bureau of Meteorology seasonal outlook summary, issued 9 July 2020

- The next two weeks are likely to see below average rainfall for large parts of Australia. A wetter than average fortnight is likely for much of the east coast of Queensland and coastal NSW.
- The outlook for August to October indicates a wetter than average three-month period for most of the eastern two thirds of Australia, and parts of WA. Chances of exceeding median rainfall are roughly equal for southwest WA, southeast SA, Victoria, and western Tasmania.
- Both days and nights are likely to be warmer than average across Australia during August to October, though chances of warmer or cooler than average days are roughly equal across parts of the southern mainland between northern NSW and southeast WA.
- The tropical Pacific Ocean is expected to cool and may approach La Niña levels over the coming months. Warmer than average waters are likely in much of the central and eastern Indian Ocean, with both ocean basins influencing a wetter August to October outlook.

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 June 2020 BoM: Seasonal Outlook video BoM: Landscape soil water balance







Figure 1. Potential crop yield using seasonal rain to 6 July and assuming average rain for the rest of the season. Based on the French-Schulz model and water use efficiency of 12 kg/mm/ha. From Department of Primary Industries and Regional Development.

