

CROP REPORT

PO Box 1081, BENTLEY DC, WA 6983

P +61 8 6262 2128

E info@giwa.org.au

@GrainIndustryWA

www.giwa.org.au



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The 2021 Season – Frost and dry spring have reduced tonnage estimates

The recent severe frost events in the central grainbelt have shifted attention away from the lack of spring rain, but the lack of useful spring rain north of the Great Eastern Highway and the lower rainfall regions is now likely to have more impact on reducing final tonnage in the state than the recent frost events.

The very cold temperatures experienced in early September will reduce deliveries by growers in the worst hit areas by at least 50 per cent on what was expected prior to the frost events. There were also several frost events in late August over a much wider area of the state that has taken the top off crops that were at vulnerable growth stages. As well as this, more recently there were some cold mornings that will impact grain yields for crops that were flowering in regions away from the worst hit locations. The worst hit areas are obvious now, although the full extent of the impact from these frosts will not be evident for a few more weeks yet.

In the lower rainfall regions, the soil profile has also dried out to a point where the capacity for crops to recover from the frost will be limited.

At the same time as frost was reducing grain yield potential, the continuing dry conditions have really started to bite and crops in the northern grain growing regions, that were not impacted as much by the frost, have lost a lot of potential in the last few weeks. The worst case scenario has developed in the northern grain growing regions. Here, the very high potential with a lot of top growth on the crops has contributed to sucking the profile dry and without any useful spring rain to date and warm temperatures, it is shaping up to be just an “okay” year rather than one of the best for a very long time.

On a more positive note, the Esperance Port zone has largely escaped the worst of the frost to date and the lack of hot winds have let crops continue to fill. Overall, the region is still looking at a very good year. The same can be said for the Lakes District where the grain yield potential is above to well above average. The south and west Albany Port zones are recovering from the waterlogging and with a mild finish, will end up with more grain than thought possible a month ago.

Total grain production can still slide from what is currently estimated if there is no further useful rain in the northern and eastern grain growing regions, and once the full extent of the frost damage is known.

2021 Season GIWA September Western Australia Crop Production Estimates (tonnes)

Port zone	Wheat	Barley	Canola	Oats	Lupins	Pulses	State total
Kwinana	5,800,000	1,800,000	800,000	350,000	200,000	10,000	8,960,000
Albany	1,200,000	1,750,000	600,000	300,000	80,000	30,000	3,960,000
Esperance	1,400,000	1,150,000	610,000	20,000	50,000	50,000	3,280,000
Geraldton	2,200,000	300,000	400,000	5,000	200,000	2,000	3,107,000
Totals	10,600,00	5,000,000	2,410,000	675,000	530,000	92,000	19,307,000

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. Oat tonnage for grain only.

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

Geraldton Zone

Crops are rapidly approaching harvest. The excellent potential outlook for all crops in the region up until as recently as three weeks ago, has dropped off significantly due to the lack of any useful rainfall and a run of warm days above 32 degrees. There has been no useful rain north of Geraldton since early August. The light rain and cooler conditions seen this week will help arrest the slide in grain yield potential for some crops, although most are past rainfall being a benefit and will now need to rely on subsoil moisture at depth to finish grain fill.

The difference in crops between the ameliorated soils and the non-ameliorated soils, particularly the very deep ripped country, is evident and reinforces the advantage of tackling subsoil constraints in this northern region where the sort of seasonal finish we are experiencing is now the norm.

There are going to be some good yields closer to the coast and the region overall is still in for a good year, however, the near record tonnage potential of a few weeks ago will not be there.

The well grown lupin crops are short on pods and the canola flowering was cut short due to heat and lack of moisture.

Kwinana Zone

Kwinana North Midlands

A similar but less acute scenario to Geraldton is unfolding further north in the Midlands region with crops losing the potential from a few weeks ago from the lack of finishing rains. Combined with this, areas of frost are going to take the top off crops in susceptible parts of the landscape. Those areas that were waterlogged are really starting to show up which will also impact on average paddock grain yields.

Overall, the region is on track for just an average year rather than a very good one due to the combined influences of waterlogging, lack of finishing rains and frost impacting on different areas of the region and landscape.

The large area of crop sown, particularly in the lower rainfall eastern region of the zone from substitution of fallow to wheat will not deliver the lift in tonnes expected a few weeks ago as these areas have been impacted by frost and the heavier soils tightening up from the dry conditions.

Kwinana South

The Kwinana South zone is on track for an above average year for total grain production, as there is less frost damage than further north and east, and subsoil moisture reserves are generally higher. The eastern fringes of the zone, bordering with the Kwinana North zone, have been very badly impacted from the frosts and growers here will have well below average tonnages. However, as an overall outlook, the badly affected areas are a small proportion of the total area in the zone.

The waterlogged areas are now showing up more in the western areas, although the very poor areas are small. The later start in the central regions of the zone and the lower than average total rainfall will keep the grain yields to only about average. In the western areas that are not waterlogged, yields will be well above average.

Kwinana North East

The Kwinana North East zone has been impacted by both the very severe frosts, around Merredin and north/east in a line from Kalannie down to Bruce Rock, as well as very dry conditions. Individual growers are going to have significantly reduced tonnage depending on where they are in the landscape, the growth stage their crops were at when the frosts hit, and the level of subsoil moisture available to allow some recovery. In general, travelling further east and north away from Merredin, the impact from both frost and the dry conditions have combined to reduce the outlook from very, very good to below or well below average in the space of one month.

The fear that with the early start to the season and very good winter growth, finishing moisture would not be able to support the resultant top growth that has now eventuated for a lot of the region. The complete lack of spring rainfall was always a chance and unfortunately this has been the case so far. The cool conditions in the last few days will help, although crops that are not too advanced will benefit from rain in the next two weeks.

The tonnage estimates for the Kwinana East zone were very conservative last month and were based on an average seasonal finish. Projections were higher for better than average finish scenarios. However, a worse than average finish is shaping up and most of the slide in tonnage in this report is equally split between the Geraldton Port zone and Kwinana East zone. The actual grain yield potential lost in this zone is probably closer to a few million tonnes.

Albany Zone

Albany West

Waterlogging has been the biggest problem all year in the region and just as things were starting to dry out, the region received some more rain in late August to top the profile up again. The low-lying areas are very poor and will struggle to recover, whilst the crops higher up in the landscape will end up being very good if there are no adverse weather events to come. There are big holes in cereal and canola paddocks from waterlogging and this will keep average paddock yields to around average rather than above average.

The grain yield potential for all crops is only going to be about average or slightly above average for the region due to the large areas of significantly reduced yield from waterlogging.

Many crops were boosted with nitrogen to combat the waterlogging and this has helped the grain production outlook. The dollar spend on nitrogen in the region has been very high this year and whilst helping with waterlogging, if only average yields are obtained, may not be sustainable going forward considering the higher fertiliser prices.

Albany South

Growing conditions in the region have been a rollercoaster this year. The very good start soon deteriorated from very severe waterlogging in places, then had a marked improvement from the soft finish allowing crops to recover. The recovery has been helped by the extra applications of nitrogen and whilst this has come at a cost, it looks to be paying off at the moment.

The barley and wheat are recovering the best, whilst the lupins and to a lesser extent the canola is flat on the ground which will pose challenges at harvest.

The improvement in outlook in this region has contributed to a slight increase in potential grain production for the zone.

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Albany East (Lakes Region)

The region is still on track for a very good year with tonnage estimates unchanged from last month. The region did not get as cold as further north and most crops were not at vulnerable growth stages when the frosts hit a few weeks ago. There has been bad frost damage in some paddocks in some areas, although the impact on the region is small at present. Most of the region received useful rainfall in August and there have been some light falls to date in September to help keep grain fill on track.

The large areas of barley are now well into grain fill and just need to get through the next two weeks to be in the clear. The canola has looked good all year and still does. There has been low disease and insect pressure this year and mice areas seem to be under control.

Esperance Zone

The Esperance Port Zone is still on track for a very good year with more than 3 million tonnes of total grain production currently expected. The regions to the north of Esperance that held back tonnage to below 3 million in 2020 are in better shape this year, and the coastal areas have not been as wet as they often are. There has been some frost in the east of the zone that will hold tonnage back a little, although most of the zone so far has largely escaped unscathed.

Crops are starting to feel the pinch from the lower than average spring rains, although the lack of hot winds to date have helped with grain fill. The top will be taken off the large bulky barley crops if there are no more significant rainfall events.

There have been no major issues with disease or insects this year and the extra nitrogen use has helped crops combat the waterlogging in susceptible areas.



Season Outlook, September 2021

Ian Foster, Department of Primary Industries and Regional Development

DPIRD climate summary

Below average rainfall in August brought an abrupt end to the run of wetter conditions for much of the northern and eastern agricultural areas. Soil water storage has been declining over much of this region but remains high for the Great Southern and western South Coast.

A series of frost events have occurred over central and eastern cropping areas in the first part of September, see Figure 1. These have seen minimum temperatures down to minus 5 degrees C. Conversely, the northern cropping region has been affected by daytime temperatures into the low 30's.

Climate conditions in the Pacific Ocean are indicating continuing cooling, with some chance of a weak La Nina event later in 2021. The negative Indian Ocean Dipole (IOD) event in the tropical Indian Ocean has passed its peak and will end in the next couple of months. Most climate models have neutral rainfall outlooks for October to December for most of the agricultural area. The exception is the Esperance region, where rainfall chances are enhanced.

Shorter-term outlooks have high pressure to the south and east of WA, consistent with a positive Southern Annular Mode in the Southern Hemisphere. This means drier than normal conditions for the rest of September.

Bureau of Meteorology seasonal outlook summary issued 16 September 2021

October to December rainfall is likely to be above median for the eastern two-thirds of Australia, but below median for parts of northern WA and western Tasmania.

Maximum temperatures for October to December are likely to be above median for the northern tropics extending down into central WA, and far south-east Australia. Below median daytime temperatures are more likely for the southern WA coastline and parts of eastern Australia.

Above median minimum temperatures for October to December are likely for almost all of Australia, except southern WA, where the chances of warmer or cooler than median nights are roughly equal.

The negative Indian Ocean Dipole has weakened, but this pattern typically favours above average rainfall for parts of Australia. The El Niño–Southern Oscillation is neutral, with cooling of the tropical Pacific likely in the coming months. This may also be increasing the chances of above average rainfall for much of eastern and northern Australia.

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 August 2021](#)

[BoM: Seasonal Outlook video](#)

[BoM: Landscape soil water balance](#)

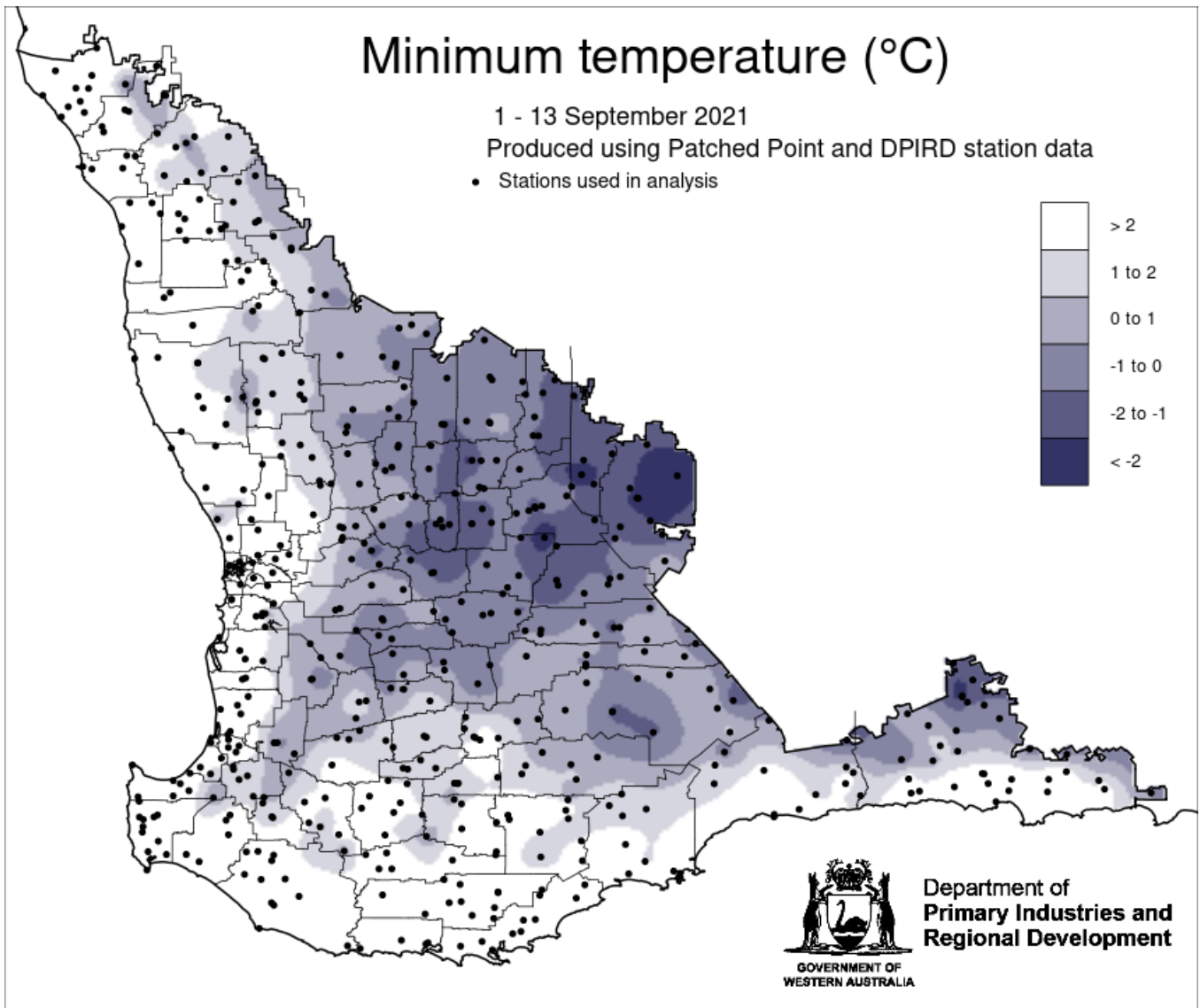


Figure 1. Lowest air temperature recorded for 1 to 13 September from DPIRD and BoM weather stations. From DPIRD.

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