

# District Reports...

September–October 2019

Unfortunately, the Esperance port zone is not in a strong position to cut frosted crops for hay. Transport and a lack of suitable hay cutting equipment are big obstacles as well as not knowing if there will be a suitable market either within WA or interstate.

The 2019 season is going to be remembered for all the wrong reasons – a very challenging year full of climatic fluctuations.

**Quenten Knight**  
Agronomist, Agronomy Focus, Esperance  
September 19, 2019

## Southern region

### SOUTH AUSTRALIA SUMMARY

Winter rainfall in South Australia's major cropping regions was average to below average. But the rainfall was timely and benefitted crop development in most regions. Soil moisture levels at the beginning of spring were below average in most northern cropping regions and mostly average in the lower Eyre Peninsula, the Mid-North, the lower Murraylands and the South East.

The seasonal conditions that BOM predicts as most likely over spring will hamper grain development, especially in the northern Mallee, the Upper-North and the northern Eyre Peninsula. Crops in regions with average or better soil moisture levels at the beginning of spring will be in better condition and benefit most from timely rainfall and average temperatures in October.

Winter crop production in South Australia is forecast to be around 6.6 million tonnes. This forecast reflects an estimated 9 per cent increase on last season in planted area to around 3.6 million hectares and expected yield improvements in key growing regions.

Yields are forecast to be around average in the lower Eyre Peninsula, the Mid-North, the lower Murray lands and the South East, and below average in most northern cropping regions.

Canola production is forecast at around 300,000 tonnes. Canola crops in most regions were generally in good condition at the beginning of spring and the average yield is forecast to be close to the 10-year average.

*ABARES Australian Crop Report, September 2019*

### VICTORIA SUMMARY

Seasonal conditions were generally favourable for crop development during winter in Victoria. Rainfall in most cropping regions was sufficient to put most cereal and canola crops in good to very good condition at the beginning of spring.

### Seasonal rainfall across the grain regions – 25 year averages and year to date

Brought to you in association with  JOHN DEERE	25yr Annual Average (mm)	2019 rainfall to date (mm)	Summer		Autumn		Winter		Spring	
			25yr Annual Average (mm)	2018–19	25yr Annual Average (mm)	2019	25yr Annual Average (mm)	2019	25yr Annual Average (mm)	2018 to date
Emerald Qld	564	259	251	52	106	182	67	44	125	0
Toowoomba Qld	679	282	276	73	138	232	86	25	180	1
Roma Qld	579	151	256	36	119	133	75	18	134	0
Goondiwindi Qld	619	149	253	66	123	110	98	27	147	0
Narrabri NSW	621	140	217	69	119	111	123	15	162	1
Gunnedah NSW	627	195	211	65	108	144	126	28	183	2
Dubbo NSW	588	188	184	117	125	70	129	24	152	11
West Wyalong NSW	437	205	118	84	79	85	120	48	122	8
Wagga Wagga NSW	531	231	134	111	109	83	147	78	141	16
Swan Hill Vic	308	155	69	57	64	58	87	72	88	10
Bendigo Vic	490	265	100	60	105	78	158	138	128	31
Horsham Vic	365	233	76	41	71	66	120	133	99	22
Lake Bolac Vic	506	397	108	72	103	171	153	170	142	35
Murray Bridge SA	358	192	66	30	80	53	120	109	94	23
Kadina SA	327	192	60	9	76	70	110	76	82	43
Cummins SA	390	306	51	6	89	115	174	148	76	41
Esperance WA	618	362	90	38	136	96	251	239	140	24
Wagin WA	391	274	50	7	90	51	165	211	85	12
Northam WA	407	244	61	32	87	30	189	199	80	13
Mingenew WA	347	253	33	0	86	13	171	232	57	7
Moora WA	385	229	46	6	82	20	189	199	68	9
Mullewa WA	320	182	56	12	90	37	131	146	43	5

Last rainfall reading September 23, 2019.

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Soil moisture levels in most parts of the Wimmera, North Central and Western districts at the beginning of spring were at, or above, average, which is expected to support grain formation in these regions.

The major exception to these favourable seasonal conditions was in the northern Mallee where winter rainfall was below average and soil moisture levels fell to be below average at the beginning of spring.

Winter crop production in Victoria is forecast to increase dramatically by more than 80 per cent on last season to around 6.9 million tonnes.

This forecast production increase also partly reflects a 14 per cent increase in area planted. Some winter crops in regions with low soil moisture levels are likely to be cut for hay this year, given currently high hay prices and prospects of below average rainfall in September. But this practice is not expected to be as widespread in 2019–20 as it was last year.

Canola production is forecast to more than double last season's drought-impacted result to around 620,000 tonnes.

**ABARES Australian Crop Report, September 2019**

## VICTORIAN MALLEE

For the southern Mallee, soil moisture probe data indicate crops are really on the move and accessing a lot of moisture at depth. Crops in the northern Mallee have been dealt much tougher conditions.

Frosts continue to cause concern in all parts of the Mallee, particularly with many crops reaching the flowering stage. But the incidence and severity of frost is highly dependent on location and growth stage.

Upper canopy blackleg has been observed in some canola paddocks, particularly untreated and early sown varieties. But as the weather dries, risk of new infection reduces. Assessments



The BCG's Main Field Day this year (September 11) was a well-attended event held at Andrew and Lachlan Barber's farm just west of Birchip.

are currently being made whether to windrow or direct head for canola.

Insect activity is high at this time of year but not all activity necessarily warrants control. Native budworm is active, army worm, aphids and grubs are all present and moth flights have been observed. Growers will soon decide whether to 'pull the trigger' on spraying lentils to protect them based on economic thresholds.

Shearing and livestock feeding has been keeping mixed enterprise growers busy and in the drier regions, the question of salvaging crops for hay is being considered. Hay cutting has already commenced in some locations.

Attention now turns to harvest logistics including managing grain storage options and ensuring harvest equipment and labour requirements are ready to go.

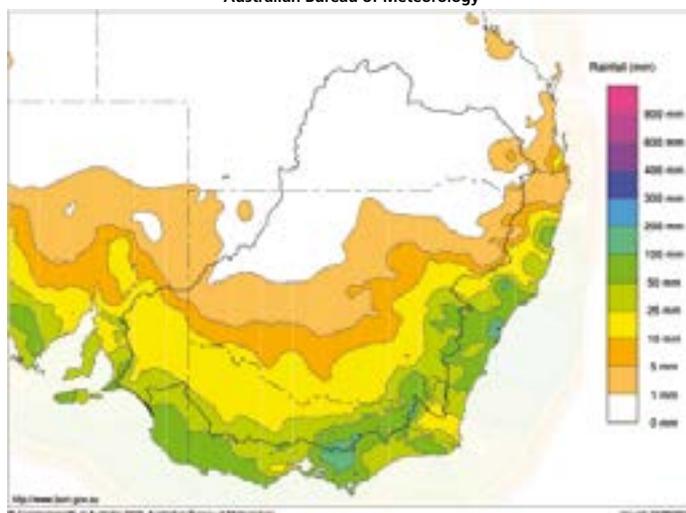
Most of the relevant weather forecasting models are predicting drier conditions for the coming three months.

**Louisa Ferrier**

**Engagement and Member Services Leader,  
Birchip Cropping Group  
September 18, 2019**

## Murray–Darling Basin rainfall totals (mm) for September 1 to 24, 2019

Australian Bureau of Meteorology



The southern states have enjoyed some very handy September rain while the dry story continues for much of NSW and Qld.

## Northern region

### NSW SUMMARY

The area planted to winter crops in central and northern NSW was well below average reflecting the prolonged hotter and drier than average conditions leading into the planting window.

Winter rainfall was generally below to very much below average in all cropping regions of NSW, and in some northern cropping regions, was the lowest on record.

After a promising start to the winter crop season in southern NSW, winter rainfall was generally below average and soil moisture levels fell significantly. The low levels of soil moisture mean early spring rainfall will be critical for grain development in regions that still had viable crops at the start of spring.

Winter crop production is forecast to be around 5.0 million tonnes in 2019–20 which is half the 10-year average.

The area planted to winter crops this season in NSW is

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estimated to be 3.7 million hectares. This is well below average, which reflects prolonged the drier and hotter than average seasonal conditions. Area planted in central and northern NSW is very low. Additionally, some winter crops with adequate biomass in southern cropping regions are likely to be cut for hay, reflecting current high hay prices and the risk of grain yields falling significantly during a hotter and drier than average spring.

Canola production in NSW is forecast to reach 370,000 tonnes in 2019–20. Yields are forecast to be well below average at around 1.0 tonne per hectare and some canola crops will be cut for hay.

## NSW summer crop

The area expected to be planted to 2019–20 season summer crops in NSW is forecast to be the lowest on record at around 230,000 hectares. This is because soil moisture levels are close to zero and supplies of irrigation water are very low. It will take significant rainfall for this outlook to improve.

*ABARES Australian Crop Report, September 2019*

## QUEENSLAND SUMMARY

Winter rainfall in most cropping regions in Queensland was very much below average. Seasonal conditions in the southern cropping regions were hotter and drier than average and reduced soil moisture to below average levels. But average winter rainfall fell north of Emerald in central Queensland.

Winter crop production in 2019–20 in Queensland is forecast to be 732,000 tonnes, driven by expected reasonable yields in some parts of central Queensland. This forecast production is 60 per cent lower than the 10-year average of 1.8 million tonnes.

The area planted to summer crops in Queensland in 2019–20 is forecast to be around 514,000 hectares. This is largely due to a significant fall in area planted to cotton and grain sorghum.

*ABARES Australian Crop Report, September 2019*

## DARLING DOWNS

### Weather conditions

What a shocker of a season – of a year really – with many growers having under 150 mm of rain for the year and under 50 mm for the past five months. The outlook for spring is grim with little chance of returning towards average falls of rain until January 2020.

### Winter crop

All the dryland cereal crops across the Downs are being harvested for hay or silage, and even those growers considering grain are finding conditions too harsh to fill heads properly.

The small irrigation areas are producing some grain crops, but again many of these have been cut for hay or silage, with stockfeed prices increasing every week. An early assured and profitable return is attractive compared to possible pest attack close to harvest, and

# Nozzle control is the big issue out here



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Irrigated barley headed towards a silage crop.

the increased likelihood of storm damage this spring.

Chickpeas on the Central Downs are now flowering and being attacked by large populations of helicoverpa grubs. Some of these crops have been looking OK but they are now running out of moisture.

## Summer outlook

The lack of spring rainfall looks like delaying planting until November/December – if it rains by then. There is a small area of fallow ground that could go in if rainfall is on the way, but many growers are looking for 50 mm plus to start with.

Sorghum will be the main crop, with both grain and forage crops on the agenda. The cotton area will possibly be only 20 per cent of last season with the accompanying lack of available irrigation water. Silage corn is a very attractive option for growers



Record prices for stockfeed make crops such as silage corn a very attractive option – if you've got the water!



A graphic depiction of the self cracking clay soils of the Darling Downs.

with water, as crops are being contracted at record prices, and so the early season irrigation is being used for this.

The later the break in the season, the more popular mung beans will become, and this could be a big season for the crop.

## Discussion points

The effects caused by the prolonged dry are showing up in soil test results, with higher levels of N left following lower yielding crops last summer, along with some higher levels of salt.

The amount of nutrition being removed in hay and silage is also of a concern, and how this will be replaced. Short term, cover crops are being considered for this summer to combat the number of bare paddocks and help any moisture to infiltrate into the profile.

**Hugh Reardon-Smith**  
Agronomist – Landmark, Pittsworth  
September 18, 2019

## ANSWER TO IAN'S MYSTERY TRACTOR QUIZ

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# SOUTHERN AUSTRALIA

## FOCUS

COVERING CROPPING SYSTEMS OF SOUTHERN NSW, VICTORIA, TASMANIA, SOUTH AUSTRALIA & WESTERN AUSTRALIA

## Research delivers a heads-up on barley head loss

**R**ESearch has generated findings and genetic material that could help produce future barley varieties that are less susceptible to 'head loss' – an issue that significantly reduces barley crop yields in some areas and seasons.

The work has also highlighted the importance of growers comparing the risk for different varieties and ensuring barley crops at critical growth stages have adequate access to potassium and copper, as crops deficient in these nutrients were found to be much more prone to the issue.

Barley crops in areas such as Western Australia's south coastal districts and South Australia's Lower Eyre and Yorke Peninsulas are especially susceptible to head loss. This is caused by straw under the head breaking and results in yield losses of five to nine per cent in typical seasons in these areas.

### Collaborative project

The research findings are from a project with Grains Research and Development Corporation (GRDC) investment, led by

Chengdao Li, director of the Western Barley Genetics Alliance. This collaborative project involved work by the Department of Primary Industries and Regional Development WA, Murdoch University and the University of Adelaide.

Chengdao said the laboratory work and field trials at Esperance, Katanning and Geraldton had revealed information and developed advanced breeding lines, new germplasm and molecular markers which had the potential to be used in breeding programs.

"Our research suggests barley varieties will be less susceptible to head loss if the barley 'peduncle' – the straw beneath the barley head – is bred to have greater flexibility and strength," he said.



Professor Chengdao Li inspects barley at a field trial of the genetic, environmental and management factors that reduce barley head loss. (PHOTO: DPIRD)



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“A significant finding from this project is the relationship between straw strength and straw flexibility, and some varieties are significantly more flexible and are less prone to breakage.

“We identified quantitative trait loci (QTL) associated with straw strength on three chromosomes and these could be used as selection targets by barley breeders.”

### Seasonal impact on straw strength

Chengdao said seasonal conditions were shown to have a significant effect on straw strength, with some varieties demonstrating a significant variation in straw strength in different years of the trials.

He said the head loss risk of barley varieties varied significantly and several high yielding, new varieties and advanced breeding lines had an even greater head loss risk than current susceptible varieties.

### Potassium levels also have an impact

“The research also demonstrated that varieties respond differently to low levels of potassium, suggesting that genetically improving potassium use efficiency in barley varieties will not only enhance yields and reduce the need for fertiliser, but also improve straw strength and reduce head loss,” he said.

Chengdao said the project showed that the same variety sown at the same trial could have head loss levels up to two to three times greater if copper and potassium were deficient during the stem elongation and head formation stage of the crop.

“This shows the importance of providing adequate levels of these nutrients, particularly during this growth stage,” he said.

“For example, up to 30 per cent of soils in WA’s cropping regions are deficient in potassium and this can be exacerbated on sandy soils in the south coastal region where nutrients are prone to leaching.”

Varietal head loss risk information is available in sowing guides such as the Barley Sowing Guide for WA, available at <http://bit.ly/2MYdYnV>

# Using stubble as a trellis points to more profitable field peas

**F**IELD pea production could become a more viable option for growers, with researchers from the Centre for Crop and Disease Management (CCDM) investigating a simple and cost-effective method for reducing disease and increasing yield.

Results of student-run trials – at Curtin University in Western Australia in 2018 – show that using precision sowing and retaining the previous year’s wheat or canola stubble as a trellis to elevate the canopy, combined to provide a double benefit to growers.

The natural trellis provided by the stubble limited disease spread, increased final yield and reduced crop lodging.

CCDM researcher and Curtin Agriculture and Food Discipline lead Sarita Bennett led the study and said the findings could be key in realising the potential of field pea as a valuable component of crop rotations.

“As with other legumes, disease is an issue for field pea and this, combined with mixed success from the use of fungicides to control disease impact, has deterred many growers from adopting them into their cropping rotations,” Sarita said.

“For disease control to be effective, fungicides must be combined with other management strategies. Our researchers set out to identify these strategies in this study and achieved some promising results.”

The CCDM is co-supported by Curtin University and the Grains Research and Development Corporation (GRDC).

“A key focus of the CCDM is to help grow the next generation of agriculture research leaders, so it is a great outcome to have Curtin agribusiness students actively involved in trials with our researchers, leading to on-farm advice for growers,” CCDM co-director, Professor Mark Gibberd said.

### Stubble retained vs flattened

During the trials, plants were grown under small-scale experimental conditions and evaluated with two treatments – one where the stubble was retained and another where the stubble was flattened, or rolled.

Sowing was conducted at two times, four weeks apart – the first in mid-May 2018 and the second in mid-June 2018.

The results found:

- Ascochyta blight (or black spot) infection – which is the main contributor to field pea losses to disease – was significantly reduced in plants that were trellised on standing stubble.
- Disease incidence was highest in early-sown peas without stubble, with around an infection score of about 25-30 per cent in the third week of August, increasing to 50 per cent by mid-September.
- In contrast, where the stubble was retained, the infection rates were similar for both times of sowing mid-season, and significantly lower from mid-September, than when the stubble was flattened.
- The highest yield of 2.3 tonnes per hectare came from the earlier sown plants growing in retained stubble, and this is most likely due to reduced disease.



Barley head loss in the field. (PHOTO: DPIRD)