



# Crop and Pasture Report South Australia

2019–20 Harvest

January 2020



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This is a bimonthly report prepared by Rural Solutions SA, for the Agriculture Food and Wine Division of Primary Industries and Regions SA (PIRSA).

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# State Summary

## Weather

- November rainfall varied from above average in the Lower South East to below average in the Lower North, Upper North, Kangaroo Island and most of Eyre Peninsula.
- December rainfall was below average to very much below average across most of the agricultural area.
- In the Pastoral Zone, November rainfall was generally average to below average with pockets receiving well below average falls.
- December rainfall was average to very much below average across the Pastoral Zone with several areas observing their lowest December rainfall on record.
- Mean maximum temperatures in November were below average in the South East and above average in the western part of North West Pastoral Zone.
- Maximum temperatures for December were very much above average across the State, and Western Eyre Peninsula and most of the Pastoral Zone recorded their highest mean December temperature on record.
- Mean minimum temperatures for November were below average for most of the agricultural districts. Northern Yorke Peninsula, the Mid North and some areas of the Pastoral Zone were very much below average.
- December minimum temperatures were above average on Kangaroo Island and the South East and very much above average in the rest of the State. A large area of the Pastoral Zone had its highest minimum temperature on record for December.
- Strong northerly winds and dry thunderstorms with lightning occurred on several occasions.

## Crops

- The estimated total SA crop production remains at 6.2 million tonne from 3.85 million hectares.
- Harvest was delayed for some growers by cool conditions in November and hot windy/high fire danger conditions in late December.
- By early January most areas had completed harvest with only a few farmers on Southern Yorke Peninsula and the Lower South East still harvesting.
- Yields of cereal, oilseed and pulse crops were highly variable across the State, depending on rainfall received.
- Most areas of the State produced below average yields.
- The areas worst affected by lack of rainfall were the north and north-eastern section of the Upper North, the eastern Mid North, Northern Murray Mallee, and the Far West Coast and Eastern Eyre Peninsula. Some farmers in these areas were unable to harvest enough grain for next season's seed requirements.
- Yields in the Lower South East and western part of the Upper North were generally above average.
- Yields in Lower Eyre Peninsula were generally average to slightly above average, despite severe grain losses of over 2.0 t/ha in some crops from strong winds on 20 November.
- High water use efficiencies were reported in many barley crops across the State. Barley handled the hot dry finish to the season better than wheat.
- Canola yields on Western and Lower Eyre Peninsula, Kangaroo Island and the South East were average to above average. In all other districts, canola yields were below average to well below average. Grain oil content was average to above average across the State.

- Wheat grain quality was average to above average due to low screenings, above average grain protein and high test-weights. A high percentage made milling grades.
- Barley quality was better than expected with a higher than normal proportion of malting barley varieties classified as malt and most feed varieties classified in the highest feed quality segregation.
- Bean and lentil crop yields were average to above average on Lower Eyre Peninsula and the South East, and below average to well below average in all other districts.
- Chickpea crops performed poorly due to dry spring conditions and lack of stored soil moisture at seeding time so most yields across the State were well below average.
- Some field pea crops were severely damaged by frost. Crops not damaged by frost still yielded below to very much below average.
- Pests and diseases were generally low across the State, resulting in minimal crop losses.
- With very little late spring and early summer rain, summer weed numbers are generally low.
- Numerous fires that burnt more than 270,000ha, were started by dry lightning and in some cases machinery. Approximately 2,000 hectares of unharvested crop was lost, most of which was in the Yorketown fire.

## Pastures

- Livestock have grazed crop stubbles and there is minimal quality feed remaining in most districts. Stubbles on Lower Eyre Peninsula and the South East still contain some quality feed.
- Livestock producers in most districts have begun feeding hay to maintain livestock in reasonable condition.
- An increasing number of producers are planning to feed livestock in confined areas once pasture and stubble feed is exhausted.
- There is a risk that some crop stubbles, particularly on lighter sandier soils, will be over grazed increasing the risk of erosion.
- In districts with sufficient crop growth, farmers have baled straw to supply bedding for intensive livestock industries and provide supplementary feed for livestock.
- Farmers in most districts have sold excess stock and will only maintain breeding stock over summer.
- Newly sown lucerne stands have been severely stressed by dry conditions and many plants are likely to die without good rains over summer. Established lucerne stands grew well during November and December but are beginning to show signs of moisture stress.
- The bushfires across the State resulted in estimated stock losses of over 60,000 head (as at 7 February 2020).

## Pastoral Zone

- The prolonged dry conditions across most of the pastoral areas has resulted in continued de-stocking with an increasing number of properties totally de-stocked.
- Some bores reported to have reduced water flows and becoming more saline.
- Some pastoralists have bought hay to supplementary-feed ewes over summer and maintain them in reasonable condition for mating. The availability of frosted hay at a lower price this year makes it more economical to feed to breeding stock.
- Goat numbers and their condition have declined significantly with the drought.

## **Key links to other information**

[Department for Environment, Water and Natural Resources - Soil and Land Condition monitoring](#)

[Bureau of Meteorology - Weather and rainfall observations](#)

## **Notes on the calculation of crop estimates**

Crop estimates for the current year assume average rainfall and temperature conditions for the remainder of the growing season.

Grain estimates are for total grain production and include grain delivered for immediate sale and warehousing plus grain retained on farm for seed, feed and future sale.

Hay estimates are for total hay production and include all pasture, cereal and other crops cut for hay, both dry-land and irrigated.

The estimates are based on information provided by Rural Solutions SA District Reporters from a variety of sources and are updated throughout the season as conditions change and further information becomes available. They are intended to provide an indication of crop potential at the time the report is prepared.

The estimates are updated using ABS census data as available.

# Crop Estimates

**TABLE 1 CROP ESTIMATES BY DISTRICT**

		Western Eyre Peninsula	Lower Eyre Peninsula	Eastern Eyre Peninsula	Yorke Peninsula	Upper North	Mid North	Lower North	Kangaroo Island
Wheat	<i>ha</i>	425 000	144 000	376 000	162 000	238 000	241 000	63 500	3 600
	<i>t</i>	467 000	467 500	357 000	436 000	321 000	530 000	152 000	11 000
Durum	<i>ha</i>	0	0	0	16 500	7 000	6 700	4 300	0
	<i>t</i>	0	0	0	36 300	11 000	12 800	8 500	0
Barley	<i>ha</i>	94 500	73 000	76 500	165 000	96 500	97 000	21 500	1 600
	<i>t</i>	137 000	254 000	77 000	528 000	154 000	242 000	55 000	4 800
Oats	<i>ha</i>	16 000	3 300	4 600	3 500	4 800	4 200	2 800	1 600
	<i>t</i>	12 500	8 500	4 600	7 000	5 200	7 100	5 300	4 500
Rye	<i>ha</i>	0	0	0	0	0	0	0	0
	<i>t</i>	0	0	0	0	0	0	0	0
Triticale	<i>ha</i>	400	500	500	1 000	1 200	1 700	400	100
	<i>t</i>	400	1 500	500	2 100	1 700	3 200	950	350
Peas	<i>ha</i>	3 000	3 400	3 500	11 000	12 000	14 500	6 100	400
	<i>t</i>	2 400	5 500	2 500	12 200	10 700	16 500	8 500	500
Lupins	<i>ha</i>	1 500	18 000	5 000	1 000	3 600	1 800	500	1 000
	<i>t</i>	1 200	27 000	4 000	800	3 200	1 800	650	1 600
Beans	<i>ha</i>	400	13 000	400	9 700	11 200	11 500	2 500	3 000
	<i>t</i>	600	22 000	300	10 700	11 200	11 500	2 200	4 100
Chickpeas	<i>ha</i>	0	400	200	8 800	4 600	2 500	700	0
	<i>t</i>	0	550	100	7 500	4 100	2 100	550	0
Lentils	<i>ha</i>	1 000	9 500	2 000	103 000	6 600	11 000	3 600	0
	<i>t</i>	900	16 500	1 800	134 000	6 000	11 000	4 700	0
Vetch	<i>ha</i>	2 400	2 000	2 000	2 000	5 600	5 500	300	0
	<i>t</i>	750	1 500	900	800	1 100	1 700	150	0
Canola	<i>ha</i>	4 500	70 000	8 000	16 300	16 200	21 500	2 200	4 300
	<i>t</i>	5 600	140 500	5 000	22 000	19 500	23 500	2 500	9 500
Hay (not in total)	<i>ha</i>	5 000	7 300	13 000	28 500	28 500	51 000	21 200	8 500
	<i>t</i>	10 500	33 000	28 500	115 000	86 000	183 000	76 500	37 000
Total	<i>ha</i>	548 700	337 100	478 700	499 800	407 300	418 900	108 400	15 600
	<i>t</i>	628 350	945 050	453 700	1 197 400	548 700	863 200	241 000	36 350

**TABLE 1 CROP ESTIMATES BY DISTRICT (CONT)**

		Central Hills & Fleurieu	Lower Murray	Nth Murray Mallee	Sth Murray Mallee	Upper South East	Lower South East	State Total
Wheat	<i>ha</i>	3 600	59 000	245 500	100 500	69 000	23 000	2 153 700
	<i>t</i>	8 000	59 000	98 000	141 000	173 000	83 000	3 303 500
Durum	<i>ha</i>	300	1 000	300	1 000	8 500	0	45 600
	<i>t</i>	500	800	50	900	17 500	0	88 350
Barley	<i>ha</i>	10 000	76 000	79 000	120 000	34 000	5 500	950 100
	<i>t</i>	23 500	106 000	31 500	191 000	91 000	20 000	1 914 800
Oats	<i>ha</i>	1 600	2 000	2 200	3 000	18 500	5 200	73 300
	<i>t</i>	3 200	1 800	650	3 900	42 300	15 500	122 050
Rye	<i>ha</i>	0	1 000	2 000	1 500	1 200	0	5 700
	<i>t</i>	0	800	600	1 500	1 350	0	4 250
Triticale	<i>ha</i>	500	8 000	1 500	15 000	1 000	500	32 300
	<i>t</i>	1 100	8 000	450	18 000	2 000	1 800	42 050
Peas	<i>ha</i>	1 300	1 000	3 600	1 000	2 400	400	63 600
	<i>t</i>	1 800	300	550	300	3 500	900	66 150
Lupins	<i>ha</i>	1 600	1 000	3 600	1 500	12 000	3 000	55 100
	<i>t</i>	2 000	300	750	750	12 000	5 000	61 050
Beans	<i>ha</i>	300	500	0	800	27 500	12 000	92 800
	<i>t</i>	500	100	0	250	38 500	28 000	129 950
Chickpeas	<i>ha</i>	200	1 000	1 500	1 500	600	200	22 200
	<i>t</i>	200	300	300	450	600	250	17 000
Lentils	<i>ha</i>	300	1 500	900	1 500	1 400	200	142 500
	<i>t</i>	400	450	150	600	1 850	300	178 650
Vetch	<i>ha</i>	0	3 500	6 500	3 000	1 200	0	34 000
	<i>t</i>	0	700	1 300	900	950	0	10 750
Canola	<i>ha</i>	3 700	1 500	4 500	2 000	15 200	12 500	182 400
	<i>t</i>	5 200	600	900	800	21 500	28 500	285 600
Hay (not in total)	<i>ha</i>	24 000	10 000	3 600	40 000	50 000	30 000	320 600
	<i>t</i>	88 000	30 000	1 400	160 000	250 000	160 000	1 258 900
Total	<i>ha</i>	23 400	157 000	351 100	252 300	192 500	62 500	3 853 300
	<i>t</i>	46 400	179 150	135 200	360 350	406 050	183 250	6 224 150

**TABLE 2 CURRENT CROP ESTIMATES AGAINST FIVE YEAR AVERAGE**

		2014/15	2015/16	2016/17	2017/18	2018/19	5 year ave	2019/20
Wheat	<i>ha</i>	2 236 000	2 200 000	2 237 700	2 024 100	2 000 400	2 139 600	2 153 700
	<i>t</i>	4 672 000	4 315 500	6 460 500	4 122 500	3 156 000	4 545 300	3 303 500
Durum	<i>ha</i>	51 300	49 500	55 200	55 700	42 000	50 700	45 600
	<i>t</i>	118 250	86 750	209 700	139 400	75 220	125 900	88 350
Barley	<i>ha</i>	804 000	839 300	799 300	714 600	818 600	795 200	950 100
	<i>t</i>	1 922 000	1 978 000	2 774 800	1 640 700	1 725 800	2 008 300	1 914 800
Oats	<i>ha</i>	73 300	70 300	94 600	77 000	75 700	78 200	73 300
	<i>t</i>	120 700	103 000	258 700	149 300	121 500	150 600	122 050
Rye	<i>ha</i>	9 000	7 500	10 500	6 500	5 300	7 800	5 700
	<i>t</i>	9 300	6 200	15 700	5 100	3 150	7 900	4 250
Triticale	<i>ha</i>	27 100	21 800	21 500	19 900	29 400	23 900	32 300
	<i>t</i>	44 300	32 700	58 130	35 050	33 500	40 700	42 050
Peas	<i>ha</i>	98 000	102 600	97 300	90 200	65 700	90 800	63 600
	<i>t</i>	114 600	103 600	176 100	113 750	53 600	112 300	66 150
Lupins	<i>ha</i>	64 700	76 700	76 800	62 800	61 000	68 400	55 100
	<i>t</i>	72 250	63 850	134 800	53 400	59 950	76 900	61 050
Beans	<i>ha</i>	65 600	68 600	75 500	67 400	63 100	68 000	92 800
	<i>t</i>	93 900	77 300	166 530	101 660	79 680	103 800	129 950
Chickpeas	<i>ha</i>	19 700	20 500	20 500	29 700	33 600	24 800	22 200
	<i>t</i>	20 250	19 240	34 360	33 580	23 870	26 300	17 000
Lentils	<i>ha</i>	106 200	123 700	169 600	184 700	149 800	146 800	142 500
	<i>t</i>	152 350	120 080	447 680	260 200	177 870	231 600	178 650
Vetch	<i>ha</i>	23 200	29 600	32 200	32 400	28 400	29 200	34 000
	<i>t</i>	13 150	11 900	34 800	15 350	5 760	16 200	10 750
Canola	<i>ha</i>	321 200	210 500	203 000	200 200	200 100	227 000	182 400
	<i>t</i>	313 800	293 300	372 900	261 400	278 900	304 100	285 600
Hay (not in total)	<i>ha</i>	211 500	282 700	258 800	202 900	370 000	265 200	320 600
	<i>t</i>	763 000	1 094 800	1 454 300	948 600	1 104 000	1 072 900	1 258 900
Total	<i>ha</i>	3 899 300	3 820 600	3 893 700	3 565 200	3 572 100	3 750 200	3 853 300
	<i>t</i>	7 666 900	7 211 400	11 144 700	6 931 400	5 794 900	7 749 900	6 224 200

# District Reports

## Western Eyre Peninsula

### Weather

- November rainfall was below average. December rainfall was generally below average with pockets of average rainfall and an area of very much below average rainfall in the Far West.
- Mean maximum temperatures were average for November and the highest on record for December.
- Strong winds were recorded in late November and mid to late December.

### Crops

- Most farmers finished harvest in early December.
- Yields were highly variable depending on rainfall distribution.
- West of Ceduna to Penong, yields were very poor, and many farmers did not harvest some paddocks.
- There were widespread reports of frost damage affecting yields in most inland districts.
- Strong winds on 20 November resulted in grain losses of up to 1.0 t/ha in some unharvested cereal crops, however most crops were reaped before this event.
- Crops between Nunjirkompita and Wirrulla yielded about half the long-term average with reports of 0.5 to 0.6 t/ha common. South of Wirrulla to Wudinna, crops that were not frost affected yielded average to slightly below average (0.8 to 1.2 t/ha).
- Barley crops near Wudinna yielded 1.8 to 2.0 t/ha and wheat yields were slightly lower, around 1.4 t/ha. Barley yielded poorly south of Wudinna and east of Kyancutta with yields of 0.1 to 0.2 t/ha reported.
- The coastal strip from Haslam to Elliston and about 15 km inland, yielded exceptionally well with cereal yields of more than 2.5 t/ha common.
- Grain quality was excellent due to very high protein percentages and low screenings.
- Pest numbers at the end of harvest were low.

### Pastures

- Pastures paddocks contain very low amounts of feed. Most livestock producers are supplementary-feeding stock with hay and grain, either on stubbles or in containment feeding areas, where low biomass levels have left paddocks vulnerable to erosion.
- Some farmers near Streaky Bay and Mt Cooper baled straw (where good seasonal conditions produced high amounts of crop biomass). This straw will provide supplementary feed for livestock in other areas of the district.
- Good growing conditions along the coast resulted in a large area of medic pastures being cut and baled for hay.
- Crop stubbles will not provide extended grazing and most farmers have replenished hay and grain supplies in preparation for feeding stock over summer.

# Lower Eyre Peninsula

## Weather

- November rainfall was average to below average and December rainfall was below average.
- Mean maximum temperatures were average for November and very much above average for December with the north-west corner of the district recording the hottest December on record.
- Mean minimum temperatures were below average in November and very much above average in December.
- Strong winds on 20 November and mid to late December.

## Crops

- Despite delays due to poor weather (alternatively humid mornings and hot, windy weather) most farmers had completed harvest by the end of December.
- Very strong winds on 20 November knocked grain from the heads of unharvested crops, with the heavier crops the worst affected. Some farmers estimated losses were more than 2.5 t/ha. Wheat crops were the worst affected although some barley and a few canola crops were also severely damaged.
- Cereal yields in crops not damaged by wind or frost were generally average to slightly above average in the range of 3.0 to 4.5 t/ha.
- Canola yields were in the 1.8 to 2.2 t/ha range, better than the long-term average and with generally high oil content.
- Pulse crops yielded well and had good quality grain. Peas and lentils yielded 1.5 to 1.8 t/ha and many bean crops yielded more than 1.8 t/ha.
- Grain quality was exceptional due to high protein and low screening levels.
- Normal pest control programs provided sufficient control of insect pests at harvest; little significant damage from native budworm or diamond backed moths was noted.

## Pastures

- Crop stubbles contain high amounts of quality feed and livestock are in excellent condition.
- Frost damage and weed control opportunities combined with good demand and hay prices meant that more cereal hay was cut this season than normal.
- Some farmers baled cereal straw to provide feed for livestock in drought affected parts of the region.

## Eastern Eyre Peninsula

### Weather

- November rainfall was below average and December rainfall was below average to very much below average.
- Mean maximum temperatures were average for November and very much above average for December, with the northwest part of the district recording its hottest December on record.
- Strong winds and dry lightning occurred on several days in mid to late December.

### Crops

- Yields in all parts of the district were below average; many farmers reported final yields that were 10 to 15% less than earlier estimates based on early crop growth.
- Harvest was finished by early December.
- Very strong winds on 20 November knocked grain from heads of standing cereal crops causing yield losses of up to 1.0 t/ha.
- Cereals crops in the Cleve, Arno Bay, and Cowell districts which had poor rainfall all year yielded 0.2 to 0.5 t/ha. The Cleve Hills and Darke Peak districts received more rainfall so cereal crops in these areas yielded 1.2 to 1.5 t/ha; some earlier sown crops yielded 2.0 t/ha.
- Crops in the Kimba/Buckleboo districts were severely affected by dry conditions, with yields well below average. Some crops on heavier-textured soils only yielded enough grain to replace the seed sown; lighter textured soils yielded 1.0 to 1.5 t/ha.
- The area sown to canola was much lower than in recent years and the small area sown yielded 0.5 to 0.8 t/ha.
- Grain quality was generally extremely good due to high protein and low screening percentages.
- Significant frosts in the Lock district resulted in below average crop yields and large areas of crops cut for hay. Frost damage affected grain yields in a relatively small number of paddocks in the Darke Peak, Kielpa and Mangalo districts.
- Pest numbers at the end of harvest were low.

### Pastures

- Dry conditions during the season resulted in poor amounts of stubble at the end of harvest. Most livestock producers moved stock into containment feeding areas and secured grain and hay supplies early for an extended period of supplementary feeding over summer.
- Where crop yields were better, some farmers baled cereal straw after harvest for fodder.
- Dams in the Cleve Hills remain empty, due to extended dry conditions with no runoff. Producers in this area are carting water for livestock.

## Upper North

### Weather

- Rainfall for November was average in the north and below average in the remainder of the district. December rainfall was below average.
- Mean maximum temperatures were average for November and very much above average for December. The eastern part of the district observed its hottest December on record.
- Strong hot winds blew in mid-November and December.

### Crops

- Harvest in the Port Germein and Port Pirie area was completed by early November.
- In the eastern part of the district a combination of cool weather and extreme hot windy days delayed harvest; with most farmers finishing in mid to late December.
- Cereal grain yields in the western part of the district were average to above average, despite the dry finish to the season, with farmers achieving extremely good water use efficiencies.
- Cereal grain quality was better than expected and a high percentage of malting barley varieties were classified as malt. Wheat grain protein percentages were above average and had minimal screenings.
- Pulse crop yields in the west of the district varied from average to well below average. In the eastern part of the district pulse yields were below average to well below average and some pea crops were not harvested because of frost damage or drought.
- Cereal grain yields in the eastern part of the district were below average to well below average but farmers reported high water use efficiencies and good grain quality. Many crops in the north and northeast of the district were either not harvested or only parts of paddocks were harvested.
- Some farmers in the northern part of the district did not harvest enough grain to replace sown seed.
- Although most canola crop yields were below average, they were better than expected with high oil content.
- The area of cereal crops cut for hay has increased in the southern part of the district, due to frost damage and likely better returns for hay. In the northern part of the district the area of hay has been reduced because of poor growth.
- Hay yields were below average. Hay quality was excellent.

### Pastures

- Most pastures have been heavily grazed and there are some bare paddocks in the northern part of the district.
- There is limited dry feed available from pastures and stubbles. Farmers have begun either supplementary-feeding stock in paddocks or containment feeding areas.
- Farmers with livestock cut additional crop for hay or have bought hay to replenish reserves.
- In the worst affected areas farmers have reduced livestock breeding numbers but in the southern part of the district most are planning to maintain breeding livestock.
- An increased number of farmers have or are planning to feed stock in containment areas once stubbles have been grazed.

## Mid North

### Weather

- Rainfall for November was average to below average and December rainfall was below average.
- Mean maximum temperatures were average for November and very much above average for December, with the north eastern part of the district recording its hottest December on record.
- Mean minimum temperatures were below to very much below average for November and very much above average for December.
- Strong winds occurred on numerous days in mid to late December and bands of dry lightning also moved through the district.

### Crops

- Most farmers completed harvest by mid to late December.
- Wheat crops yielded approximately 20% below average, but had reasonable grain protein percentages, low screenings and high test-weights.
- Barley yields were 15% below average, but grain quality was good, with a higher than usual amount classified as malt.
- Canola yields were below average with average oil content.
- Bean crops suffered from hot winds and the dry finish to the season with most crops yielding 40% below average.
- Lentil crops yielded 25% below average and chickpeas yielded 30% below average, but grain quality was good.
- Field pea crops yields were 20% below average, with some frost damage.
- Hay production varied from close to average in the better rainfall areas to well below average in the lower rainfall districts. Most hay has been committed to export or domestic buyers, with limited amounts available for other markets.
- There has been very little germination of summer weeds due to the hot dry conditions in November and December.

### Pastures

- Most crop stubbles have been grazed by livestock so little quality feed remains. A number of farmers who normally do not or have not yet run stock on stubbles are thinking of offering these paddocks to producers burnt out in recent bushfires.
- Livestock producers are trying to hold onto as many livestock as possible through the summer and autumn period.
- Cattle producers are considering reducing numbers to reduce the quantity of hay required.
- Newly sown lucerne stands were severely stressed by dry weather and many plants are likely to die without good rains over summer. Established lucerne stands grew well during November and December but are beginning to show signs of moisture stress.

## Lower North

### Weather

- November rainfall was average in the north and below average in the south. Rainfall for December was below average across the district.
- Mean maximum temperatures were above average for November and very much above average for December.
- Mean minimum temperatures were below average for November and very much above average for December.

### Crops

- Wheat and barley yields were 20% below average. Most crops achieved very good water use efficiencies, improving earlier expectations of yields being 30% or more below average.
- Barley grain quality was good and a high percentage of malting barley varieties made malt quality. Wheat crops had above average grain protein and relatively low screening percentages, despite the dry finish to the season.
- Earlier concerns that high nitrogen applications to some crops would diminish grain quality did not eventuate. This will give farmers greater confidence to apply sufficient nitrogen to achieve rainfall-based estimated yields in future dry years.
- Pea crops not affected by frost yielded below average but frosted crops yielded poorly with 80% losses.
- Strong hot winds caused pod losses on ripe lentil crops reducing yields to 60% of average.
- Bean crops were affected by the dry spring resulting in well below average yields.
- Chickpeas were severely affected by the dry seasonal finish resulting in well below average yields. Most farmers are unlikely to grow them in 2020.
- Canola yields were well below average.
- The area cut for hay increased due to moisture stress and frost damage to cereal and canola crops. Hay yields were slightly below average but quality was good.

### Pastures

- Pastures have minimal biomass remaining and livestock are grazing crop stubbles.
- On-farm hay reserves are excellent. Prices have fallen but could rise again as a result of increased demand following bushfires.
- A few farmers who have been continuous croppers for many years are considering adding livestock enterprises to their businesses because of the effect of dry seasons and frost damage on their cropping enterprises over the last few seasons.
- Large amounts of straw were baled to supply on-going markets.

# Yorke Peninsula

## Weather

- Rainfall was average to below average for November and below average to very much below average for December.
- Mean maximum temperatures were average for November and very much above average for December.
- Strong winds occurred on numerous days in mid to late December with dry lightning.

## Crops

- Most farmers completed harvest in mid-December, however unfavourable harvesting conditions on Southern Yorke Peninsula meant some farmers did not finish until mid-January.
- Although yields for most crops were below average in the northern and central part of the district, most were higher than pre-harvest expectations. High water use efficiencies were reported.
- Yields of all crops on Southern Yorke Peninsula were average.
- Wheat yields were below average in northern and central districts and average in the south.
- Wheat proteins were good and screening percentages were low.
- Barley crop yields were average in northern and southern areas and slightly below average in central areas. A higher percentage than normal of malting varieties classified as malt, most feed varieties classified in the highest feed quality segregation.
- Lentil yields were well below average in the north, below average in central areas and average in the south.
- Canola crops yielded well below average in the north, below average in central areas and average in the south.
- Bean and chickpea crops suffered from the hot dry finish to the season, with most crops yielding well below average.
- Disease in cereal crops was extremely low due to dry spring conditions, causing little to no effect on yield.
- Numerous fires were started by lightning and machinery with most causing minimal property damage. The exception was a fire at Yorketown that burned more than 5,000 hectares destroying 1,563 hectares of unharvested crop, numerous houses, buildings, machinery and 534 livestock.

## Pastures

- Livestock are in good condition due to the high quality of pasture and crop stubbles.
- Most crop stubbles have already been heavily grazed and there is a risk that some may be over-grazed, increasing the potential for soil erosion.
- Most livestock producers had started feeding hay to maintain livestock in reasonable condition. Most are feeding frosted hay, which is of high quality.

# Adelaide Hills, Fleurieu & Kangaroo Island

## Weather

- Rainfall was average to below average for November and below average to very much below average for December.
- Mean maximum temperatures were average for November and very much above average for December.
- Mean minimum temperatures were below average for November and above to very much above average in December.
- Strong winds and dry lightning occurred on 20 December.

## Crops

### Central Hills/Fleurieu Peninsula

- Harvest was completed by mid to late December.
- Grain yields were generally below average.
- Yields were highly variable across the region reflecting time of sowing and inconsistent winter and spring rainfall.
- Hay and silage yields were below average, and quality varied depending on seasonal rainfall events.

### Kangaroo Island

- Harvest was interrupted by hot windy weather and numerous fires but was approximately 95% complete by the end of December.
- Wheat and canola yields were average to above average, while bean yields were average to below average.
- When fires occurred on the island most harvest had been completed, only 50 hectares of crop losses were reported.

## Pastures

### Central Hills/Fleurieu Peninsula

- Pasture quantity and quality available for livestock is well below average, due to the dry spring.
- The area cut for pasture hay increased to replenish depleted reserves. Excess hay is available for sale.
- Livestock numbers are well below average, but stock condition is good. Stock will continue to be sold off rapidly before they lose condition. Producers are unlikely to hold onto saleable stock unless they are offered good forward contracts.
- Producers will need to feed hay to stock over summer and autumn to ensure they maintain condition.
- The Cudlee Creek fire affected 537 livestock properties, burning 25,000 hectares and destroying more than 3,700 stock.

### Kangaroo Island

- Numerous fires started on Kangaroo Island following lightning strikes with over 200,000 hectares burnt with 216 livestock producers affected and 53,176 livestock destroyed (as at 7 February 2020).
- Before the fires there was adequate pasture quantity and the quality was being maintained as a result of the dry conditions.

- Although an increased area of pasture and cereals were cut for hay, much of this has now been burnt on the western part of the island.
- Lack of stock water continues to be a major issue for many producers on eastern Kangaroo Island, who rely on surface run-off into dams.

## Lower Murray

### Weather

- November rainfall was average to below average. Rainfall for December was very much below average in the south and below average in the central and northern part of the district.
- Mean maximum temperatures were average for November and very much above average for December, with periods of extreme heat in late December.
- Strong northerly winds occurred on numerous days throughout the period.

### Crops

- Northern areas of the Lower Murray yielded poorly because of the dry season. Higher yields were reaped in the southern areas where more rain fell.
- Most farmers completed harvest by mid-December.
- Grain production was well below average across the district with extremely poor yields in the northern part and below average yields in the southern areas.
- Grain quality was generally good in crops not damaged by frost.
- Pulse and canola crop yields were well below average, due to dry conditions and frost.
- Strong, hot winds in December caused small tonnage of grain lost from unharvested crop, but damage was minimal as most of the crop had been harvested prior to the winds.
- Frost damage in spring and a nationwide feed shortage prompted more farmers to cut crops for hay to maximise profits.
- Hay yields were below average, but hay quality was very good.

### Pastures

- There is little feed remaining in pasture paddocks, but most livestock are grazing stubbles.
- Livestock are still in good condition.
- Only small amounts of hay are being fed to supplement pastures however paddock feed is not expected to last long.
- Persistence of dry conditions over summer has limited growth of perennial pastures have heightening the risk of over grazing.
- There has not been sufficient rain to germinate summer weeds or volunteer cereals and provide additional summer feed.

# Northern Murray Mallee

## Weather

- November rainfall was average in the west to above average in the east. Rainfall for December was below average to very much below average.
- Mean maximum temperatures were average for November and very much above average for December.
- Mean minimum temperatures were below average for November and very much above average for December.
- Strong winds occurred on numerous days.

## Crops

- Crop yields were very poor and some farmers failed to get their seed back.
- Pulse crops were the worst, being particularly affected by the lack of stored soil moisture, a late break and very dry finish to the season.
- November rain was too late to benefit crops.
- Cereal yields were well below average in western and northern parts of the district, with only the best parts of paddocks harvested.
- Some pulse crops in the south eastern part of the district produced some yield but not enough to cover costs.
- Despite the poor yields, cereal quality was generally better than expected due to high protein percentages and average screenings, however price premiums above feed quality grain were less than normal.
- Many failed crops were grazed by livestock.
- Cereal crop estimated yields averaged 0.2 to 0.7t/ha across the district, while the few pulse crops that were harvested yielded up to 0.4t/ha.
- The few canola crops grown and harvested up to 0.3t/ha.
- Soils across the district will continue to be extremely vulnerable to wind erosion, due to grazing pressure and lack of vegetative cover, resulting from the last three extremely dry seasons.
- Due to poor yields and limited cashflow, most farmers will minimise expenditure on summer weed control measures and fertiliser for next year's crops.

## Pastures

- Farmers have greatly reduced livestock numbers in preparation for another summer of little paddock feed and to generate some cashflow.
- Livestock are grazing crop stubbles, reducing the need for supplementary feeding, however the amount of paddock feed is limited.
- Wind erosion remains a threat across the district due to the lack of cover on sandy rises.
- Farmers are utilising containment feeding areas and this will increase during the next few weeks.

# Southern Murray Mallee

## Weather

- Rainfall was average across most of the district for November and below average to very much below average in December.
- Mean maximum temperatures were average for November and very much above average for December.
- Mean minimum temperatures were average to below average in November and above average to very much above average for December.
- Strong winds were recorded on numerous occasions throughout the period.

## Crops

- Most farmers completed harvest by the end of December.
- Production was highly variable across the district, depending on rainfall, frost damage and farming systems.
- Yields in the southern part of the district were generally good with many being close to average.
- Yields were lower in the northern part of the district where less rain fell.
- Strong winds in December caused grain losses from ripe unharvested crops and some oat crops sustained losses of up to 30%.
- Many crops suffered some degree of frost damage. Early sown cereal crops, pulses and canola crops had the worst frost damage with reported losses of up to 100% in some paddocks.
- Barley was the best performing crop providing higher than expected yields and most crops were of good grain quality. A higher percentage than normal were classified as malt.
- Hay yields were close to average for the district and of excellent quality, due to dry conditions late in the season.

## Pastures

- Livestock remain in good condition and are grazing stubble paddocks that are high in nutritive value.
- Most farmers have replenished hay reserves.
- Lucerne and veldt grass pastures are performing poorly, due to little late spring and summer rain.

# Upper South East

## Weather

- November rainfall was average and December rainfall was below average to very much below average.
- Mean maximum temperatures were average to below average for November and very much above average in December.
- Mean minimum temperatures were below average in November and above average in December.
- Hot windy conditions occurred in late December.

## Crops

- Most producers completed harvest by the first week of January. The harvest period was slightly longer than normal due to cooler, mild weather conditions in November and hot windy weather in late December.
- Bean crop yields were average and although bean size was slightly smaller than normal, colour was good.
- Barley grain yields were average to above average. Grain quality was generally good despite some pinched grain, particularly on light sandy soils and heavy clay soils. There was also variation in grain size between varieties with some having more pinched grain than others.
- Wheat yields overall were average despite some variation between soil types. Grain quality was generally good, although higher-yielding crop tended to have lower than normal protein. Some parts of wheat crops were frosted, reducing yields.
- Canola crop yields were average to below average with high oil content.
- Lupin crop yields were significantly below average due to frost and lack of spring moisture.
- Despite reports of 10-20% of oat crops having some degree of pinched grain, yields were above average, and the quality was good.
- Many producers have warehoused grain with the expectation that prices will rise in the coming months.
- Hot, dry conditions in late spring and early summer reduced germination of summer weeds, so that weed numbers and growth are less than normal.

## Pastures

- Hay yields were above average and most of good quality. Some hay was weather damaged where rain and cooler weather lengthened curing periods causing some mould and discoloured hay.
- More straw than normal is being baled in anticipation of increased demand for fodder due to ongoing drought conditions and bushfires.
- Dryland lucerne, an important pasture for producers in the Upper South East, has not been productive this year. Stands of lucerne planted in 2019 have struggled to establish.
- The area of dryland lucerne seed has fallen 60% and irrigated lucerne seed production is down by 40%. This is due to a combination of low rainfall, low lucerne seed price, high livestock prices and the demand for lucerne hay.
- The value of producing lucerne hay is comparable to lucerne seed production with lower risk.
- Livestock remain in good condition. Supplementary feeding has commenced on some properties, but most producers are still grazing livestock on dry standing feed and crop stubbles.

- The majority of producers sold hay in the paddock or within 2-3 weeks of baling. Remaining hay is being kept on farm for feeding stock through autumn and winter.
- Livestock numbers are high, driven by high livestock returns, and the potential demand and increase in value of livestock as producers in other areas rebuild numbers following drought and fire.
- There were numerous fires with the most significant being Keilira, which burnt 23,000 hectares affecting 20 properties and destroying more than 3,500 head of stock (as at 7 February 2020).

## Lower South East

### Weather

- Rainfall was average to above average for November and average to very much below average for December.
- Mean maximum temperatures were below average in November and very much above average in December.
- Hot windy weather occurred in late December.

### Crops

- Harvest will not be completed until late January or early February, depending on weather conditions.
- Most canola crops are harvested and of well above average yields and good oil content.
- Over half the wheat and barley crops were harvested by early January.
- Barley crop yields so far have been above average and of good quality.
- Wheat yields were also above average, partially driven by increased nitrogen applications. Grain protein was lower as a result of high yields.
- There have been some isolated incidents of lodged crops, particularly where high rates of nitrogen were applied.
- Harvesting of bean crops has commenced with initial indications of average yields but smaller than usual bean size, probably due to the season's dry finish.
- Dry conditions have reduced summer weed numbers.

### Pastures

- Hay yields were above average and of below average quality, due to cooler conditions and light rainfall events prolonging curing periods.
- Silage yields were above average.
- Most producers have replenished on farm hay stocks and have good reserves.
- Many standing hay crops were sold before baling and some producers have stored surplus hay for later sale.
- Most pasture has dried off but has some green material remaining underneath. Pasture quality of dry feed is good.
- Livestock are in excellent condition with concerns that some cows are too fat coming into calving, which may result in difficult births.
- There has been significantly less incidence of flystrike than normal, due to the dry weather.

