

Western Australia

Harvest progressed at a steady pace throughout November in most of the Western Australian grainbelt, with isolated storms and lingering grain moisture causing some delays. Harvest was complete by mid December in most regions.

Despite almost 300,000 tonnes of lost grain to the November fire, the Esperance port zone recorded another record grain harvest. In other port zones, the final receivals were around average.

Yields were mostly as expected for lupins and field pea. Harvesting efficiency in short lupin crops caused some losses, particularly in the west coast districts, but overall, lupins recorded average to above average yields.

Field pea yields in the Esperance zone were above average but below average in all other zones due to the very dry spring. Grain quality is at least average.

South Australia and Victoria

The start to the planting season for South Australia was considered relatively normal, while Victorian growers were seriously affected by the lack of rainfall causing a reduced pulse planted area and final yield.

Victoria, apart from the north east region, experienced decile 1 rainfall for the spring and summer of 2015, and well below average rainfall for autumn and winter. This dry start was followed by heat waves during Spring. Harvest commenced historically early, and was all completed by the last week of November; literally one month earlier than usual.

Both states experienced three consecutive bouts of four to five day heatwaves (>30°C) with gusting northerly winds during late September and early October, right in the middle of full reproductive and flowering phases.

These scorching temperatures caused crops to mature significantly early and yields to plummet to well below average, with some crops not harvestable across Victoria. Late sown crops performed very poorly against early sown crops both in South Australia and Victoria. Grain crops sown into heavy dry cracking clay soils performed poorly against red or mixed soil types irrespective of the time of sowing.

Seed quality was relatively poor in faba bean crops with a high percentage of small and shrivelled grain occurring across both states. Lentil seed quality was good however size was small. A price spread of up to \$300 occurred between medium and large red lentil over the small red lentil. This spread was a once-off event but an indication for growers to spread their risks in planting different lentil varieties.

New South Wales

The chickpea harvest was a record in New South Wales. Substantial winter rainfall kept soil moisture at adequate levels to deliver above average yields. Chickpea yields, where planted onto good moisture levels, were above average in Central and North east districts but below average in north west districts. Faba bean yields were equally pleasing. Grain quality was average to good.

Queensland

Apart from loosing about 10 days to wet weather, the chickpea harvest was largely uneventful across Queensland, with mostly satisfactory to very good yields and grain quality.

This is a pleasing result for growers as the season didn't always look promising. Combined with the current high chickpea prices, the 2015 season has been very profitable and will deliver a large chickpea planted area in 2016 should summer rainfall replenish soil moisture.

Final Estimated Pulse Production in Australia for 2015 (tonnes)

State	Chickpea		Beans		Field Pea	Lentil	Lupin		Total 2015 (t)	% of 2014 (t)
	Desi	Kabuli	Faba	Broad	Dun	Red & Green	Sweet Lupin	Albus Lupin		
New South Wales	406,000	32,500	129,300	-	72,500	2,200	35,800	40,600	718,900	143%
Queensland	555,000	-	1,900	-	-	-	-	-	556,900	270%
South Australia	3,000	8,000	112,000	21,000	82,100	205,600	60,700	600	493,000	100%
Victoria	3,300	2,000	69,600	3,600	20,600	50,400	23,200	500	173,200	70%
Western Australia	2,500	700	6,300	-	29,300	-	435,000	10,300	484,100	113%
Total 2015 (t)	969,800	43,200	319,100	24,600	204,500	258,200	554,700	52,000	2,426,100	129%
% of 2014 (t)	204%	104%	127%	62%	75%	111%	106%	127%	129%	

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Chickpea

Desi Chickpea

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)	2,500	3,000	3,300	41,000	47,300	555,000	365,000	920,000	969,800
2015 Sown area (ha)	2,200	3,000	6,100	30,000	39,100	338,000	235,000	573,000	614,300
Variation from Dec 2015 (t)	-1,260	0	-1,600	0	-1,600	0	0	0	-2,860

Kabuli Chickpea

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)	700	8,000	2,000	3,100	13,100		29,400	29,400	43,200
2015 Sown area (ha)	500	13,900	6,800	2,800	23,500		23,000	23,000	47,000
Variation from Dec 2015 (t)	0	0	-500	0	-500		0	0	-500

Queensland

The desi chickpea harvest in Queensland was completed with no major difficulties or delays.

The main surprise was the high final yields achieved by many chickpea crops which has led to an increase of 50,000 tonnes over the October forecast for Queensland production.

Central Queensland saw a modest increase of 4,000 tonnes to a total of 80,000 tonnes, reflecting the dry conditions and the fact that many crops were planted on marginal to little soil moisture. A short spring with early summer heat also kept yields to the lower end of the average range.

Grain quality was reported as being above average with good colour, although there were reports of high numbers of splits in some samples due to low grain moisture at harvest.

Southern Queensland was been bit of a mixed bag with late opportunity plantings returning low yields, primarily due to the lateness of planting and the marginal soil moistures that they were planted into. By far the majority of crops though yielded well to very well, with many of them yielding considerably higher than expected. Yields ranging from 2.0 to 2.5 t/ha were common, with some exceptional crops achieving 3.0 t/ha.

Whilst there were no major harvest difficulties, harvest was delayed at the mid point with 10 days of wet weather.

There were varying degrees of discolouration due to the rain. However, none of the samples were seen as being particularly discoloured, other than the seed coat being clearly darker than grain harvested prior to the rain.

South Australia and Victoria

Drought was the most yield limiting factor for the southern chickpea crop for the 2015/16 season.

There were chickpea crops that were not harvested in the Mallee and Wimmera regions of Victoria.

Chickpea crops yielded well below average ranging from 0.2 t/ha – 0.5 t/ha. Chickpea crops across the Mid-North and Yorke Peninsula varied between 0.8-1.6 t/ha.

New South Wales

Chickpea yields in New South Wales, were consistent with earlier forecasts. In the north-west of NSW yields were just average at 1 to 1.2 t/ha. Closer to the Newell Highway and east, chickpea crops consistently achieved yields of over 2 t/ha.

Chickpea yields reported out of the central west were very good, with averages close to 2 t/ha.

Final Estimated Pulse Area in Australia for 2015 (hectares)

State	Chickpea		Beans		Field Pea	Lentil	Lupin		Total 2015 (ha)	% of 2014 (ha)
	Desi	Kabuli	Faba	Broad	Dun	Red & Green	Sweet Lupin	Albus Lupin		
New South Wales	265,000	25,800	50,000	-	48,100	2,600	29,000	32,700	453,200	130%
Queensland	338,000	-	1,200	-	-	-	-	-	339,200	202%
South Australia	3,000	13,900	104,000	18,000	114,000	129,500	68,000	1,500	451,900	118%
Victoria	6,100	6,800	124,000	6,500	54,000	100,000	32,000	1,000	330,400	125%
Western Australia	2,200	500	3,000	-	22,000	-	316,000	9,500	353,200	110%
Total 2015 (ha)	614,300	47,000	282,200	24,500	238,100	232,100	445,000	44,700	1,927,900	130%
% of 2014 (ha)	166%	86%	172%	101%	100%	123%	108%	136%	130%	

Faba/Broad bean

Faba bean

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)	6,300	112,000	69,600	43,900	225,500	1,900	85,400	87,300	319,100
2015 Sown area (ha)	3,000	104,000	124,000	17,000	245,000	1,200	33,000	34,200	282,200
Variation from Dec 2015 (t)	-300	3,000	-29,600	0	-26,600	0	0	0	-26,900

Broad bean

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)		21,000	3,600		24,600				24,600
2015 Sown area (ha)		18,000	6,500		24,500				24,500
Variation from Dec 2015 (t)		0	-900		-900				-900

New South Wales

The forecast production of faba beans in New South Wales was in-line with earlier forecasts in October. While yields were mostly as expected, grain quality was reported as being very good.

South Australia and Victoria

Eyre and Yorke Peninsula recorded an excellent faba bean harvest with good grain quality and yields ranging between 1.0 and 1.7 t/ha. In South Australia, the Adelaide Plains and Mid-North crop yields varied from 0.4 to 1.4 t/ha. Several crops in the Bordertown region were cut for silage during the second heat wave and several faba bean crops were burnt in the #Pineryfires.

South East of SA experienced the driest season on record. Broadbean yields varied from 0.6 t/ha to a best of 1.5 t/ha. The seed size of the broad beans was smaller due to the lack of moisture.

Victorian faba bean yields varied across the state, with most yields well below average, due to the decile 1 winter and spring season particularly in the Mallee, North Central, Wimmera and South west regions.

Yields ranged from 0 t/ha to 0.6 t/ha across the Wimmera, 0.2 to 0.6 t/ha in the Mallee and 0.4 to 2.5 t/ha in the North Central on a mix of dryland and irrigated crops, with the higher yielding areas in the irrigated regions of the

north-east. The south west region delivered low yields ranging from 0.4 to 1.0 t/ha. Several Wimmera crops were cut for silage in early October or not harvested at all.

Seed size was average to slightly below average.

The faba bean price in Victoria during harvest hovered around \$475/t, well above the long term price average (2007-2011) of \$391/t.

Broad beans yields in the south west and southern Wimmera regions yields were well below average, 0.3 to 1.1 t/ha with a smaller seed size due to low moisture availability.

For 2016, the faba bean area is set to increase in the north east, central and south west regions of Victoria and the Eyre Peninsula of SA while the price is above \$450/t. Growers have indicated faba beans are not as viable below \$350/t.

Western Australia

Faba bean yields in Esperance zone were above average with good grain quality. Reports of improved yields from PBA Samira over Nura and Fiesta, combined with the current optimism for beans, should see an increase in faba bean plantings for 2016.

Field pea

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)	29,300	82,100	20,600	55,800	158,500		16,700	16,700	204,500
2015 Sown area (ha)	22,000	114,000	54,000	40,000	208,000		8,100	8,100	238,100
Variation from Dec 2015 (t)	-1,700	1,000	-8,200	0	-7,200		0	0	-8,900

Western Australia

Most field pea crops were harvested in the Esperance region prior to the disastrous fires in November. Yields were above average at 1.6 to 2 t/ha with excellent grain quality. In the Kwinana zone, where the season finished very dry, yields were down to 1.2 t/ha for better crops with acceptable grain quality.

For 2016, the sown area in WA is likely to remain similar.

South Australia and Victoria

Stifling temperatures during September and October following a few frosts severely reduced yields of field pea crops across all regions.

Yield were well below average varying from 0.1 to 1.0 t/ha in Victoria and 0.6 to 1.3 t/ha in South Australia.

Quality was good, though with small seed, despite the low yields. Some field pea crops in the Wimmera, Mallee and North Central areas were not harvested, but those that were yielded from 0.3 to 0.7 t/ha.

In 2016 there is likely to be more area planted to PBA Wharton and PBA Gonyah varieties at the expense of older varieties, along with an increase in the area sown to the white variety PBA Pearl. While the lentil and the vetch hay price remains strong there could be a further decline in the total area planted to field pea.

Lentil

Red & green lentil

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)		205,600	50,400	2,200	258,200				258,200
2015 Sown area (ha)		129,500	100,000	2,600	232,100				232,100
Variation from Dec 2015 (t)		9,000	-8,200	0	800				800

South Australia and Victoria

Australia planted a record lentil acreage at the same time the Australian lentil priced reached an all-time historic high during harvest, achieving up to \$1,450/t and for a short period of time there was a price spread of up to \$300 per tonne paid for the medium/large (PBA Ace, PBA Jumbo2) size lentil over the small sized lentil (PBA HurricaneXT).

Lentil harvest commenced and finished in November due to the dry season. Yields varied from zero to 0.4 t/ha, enough to 'get seed back' only. There were isolated pockets in the central Wimmera where yields varied between 0.7 t/ha to 1.1 t/ha.

South Australian yields varied between 1.0 t/ha to at best 1.8 t/ha in the Mid-North. The Yorke Peninsula recorded yields of 1.3 t/ha to 2.5 t/ha and similar in the Mid to Upper Yorke Peninsula area.

Due to the significant market demand for PBA Jumbo2 and PBA Flash in 2015, there should be an increase in the area of PBA Jumbo2 and maybe a resurgence in planting of PBA Flash.

New South Wales

There were isolated areas of lentils planted across NSW from Forbes, Yenda, Wagga Wagga to Holbrook. Yields ranged between 2.5 to 3.6 t/ha and quality was good.

Expect to see an increase in the area planted to lentils through central and southern NSW riding on the back of 2015 productivity and financial success.

Lupin

Australian Sweet Lupin (*Angustifolius*)

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)	435,000	60,680	23,200	18,900	102,780		16,900	16,900	554,680
2015 Sown area (ha)	316,000	68,000	32,000	16,000	116,000		13,000	13,000	445,000
Variation from Dec 2015 (t)	-21,500	-120	-2,100	0	-2,220		0	0	-23,720

Australian Albus Lupin (*Albus*)

Region State	Western	Southern				Northern			Australia Total
	WA	SA	VIC	S/NSW	Subtotal	QLD	N/NSW	Subtotal	
2015 Production (t)	10,300	600	500	16,500	17,600		24,100	24,100	52,000
2015 Sown area (ha)	9,500	1,500	1,000	13,500	16,000		19,200	19,200	44,700
Variation from Dec 2015 (t)	-1,300	0	0	0	0		0	0	-1,300

Western Australia

Lupins recorded average to above average yields in better soil types in the Geraldton zone, but along with all other crops, did not perform well in the poor sand soils of the coastal districts across to Mingenew and Three Springs.

A consequence for 2016 of this seasons dry finish is the quality of seed for planting next years crop. Seed retained lupins needs to be tested for germination, vigour and Manganese content. Additionally, sowing rates and seed dressings may need to be reassessed to take into account the smallness of the grain. Grain quality appears to be average to good, but this doesn't necessarily indicate good seed quality.

Albus lupins have enjoyed a resurgence in 2015. While yields were disappointing due to the dry spring, confidence in the variety Amira and the agronomy package remains strong. Yields were around 1.4 to 1.7 t/ha in the wider Geraldton region, but had potential to achieve close to 2.5 t/ha.

With the expanded area, market support declined but at this stage, the sown area should increase slightly on 2015 figures.

South Australia and Victoria

Victoria's albus lupin crop is predominantly grown in the south west region. Some crops were not harvested as a result of October's high temperatures. Those crops harvested have yielded well below average ranging from 0.4-0.7 t/ha.

Similar yields are predicted for the South Australian albus lupin crops.

Australian Sweet lupins across Victoria have yielded anywhere from 0.3 to 0.7 t/ha in the Mallee, 0.4 to 0.6 t/ha in the Wimmera and slightly more in the North East and South West at 0.5 t/ha to 1.0 t/ha.

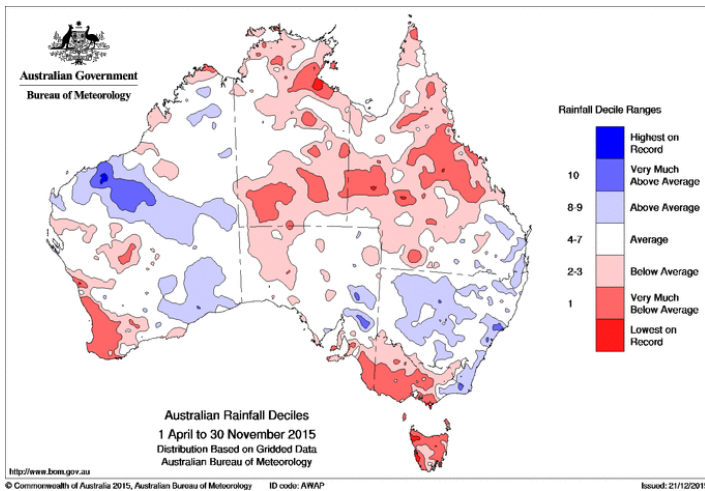
Although hot weather had a detrimental effect on lupin crops in the SA Mallee area, the lower Eyre Peninsula had better spring conditions and yields ranged between 1.3 t/ha to 1.8 t/ha. Below average lupin yields were recorded in the South East of South Australia, ranging from 0.5 t/ha to 1.0 t/ha at best.

New South Wales

The production forecast for Albus lupin in NSW is about average. Grain quality was reported as mostly above average.

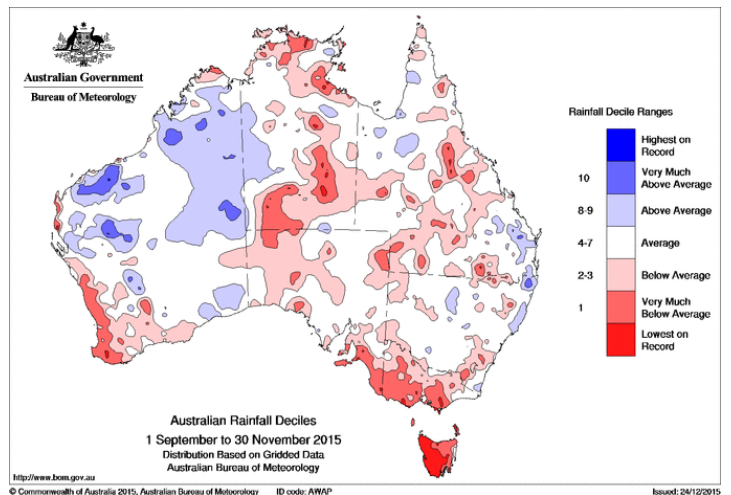
Australian weather 2015 - rainfall

Growing season rainfall deciles- April to November



Growing season rainfall across Western Australia and the south east region was low at decile 1 to 3. Western Australia recorded average winter rainfall but a very dry spring, while Victoria was dry throughout the growing season. New South Wales experienced a relatively wet season, with Queensland recording an average rainfall total for the period.

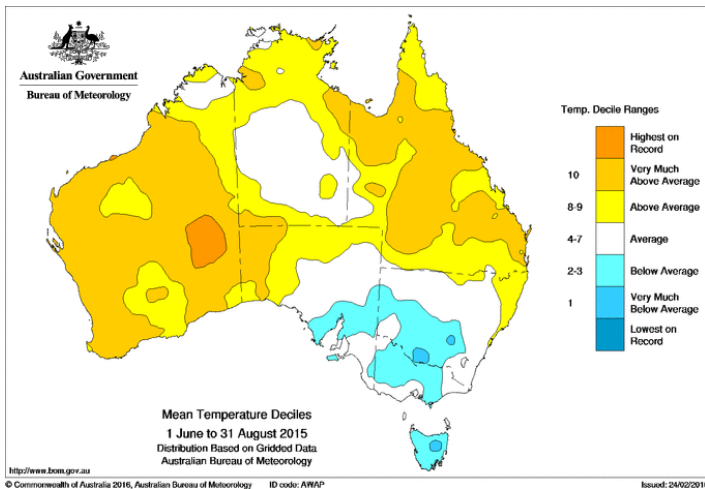
Spring rainfall deciles- September to November



September to November rainfall deciles show very dry conditions for the south east of Australia and Western Australia, contributing to below average crops yields. Northern New South Wales and Queensland recorded about average spring rainfall.

Australian weather 2015 - temperatures

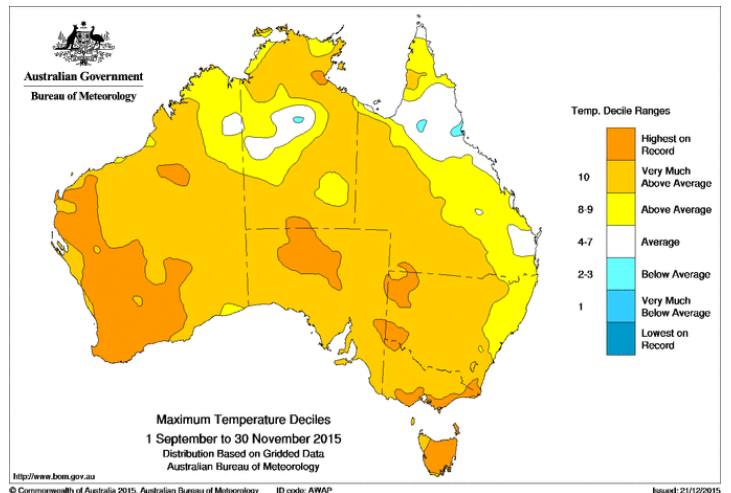
Winter temperature deciles- June to August



Winter minimum temperatures for winter across Western Australia and Queensland were very much higher than average at decile 8 to 10. Average to below average minimum temperatures were recorded in New South Wales, Victoria and South Australia.

The warmer than average conditions contributed to excellent winter growth of crops, but restricted winter growth was seen in the southern states.

Spring Maximum temperature deciles- September to November



The maximum temperature decile map for September to November (spring) shows that all of Australia recorded decile 8 to highest on record maximum temperatures.

Combined with low spring rainfall (see map above), the effect of heat shock on all crops, not only pulses, was widespread and contributed to lower yields than anticipated.

2015 was the third successive year that damaging spring frosts have not occurred on a wide scale in southern regions of WA.

5 year area and production averages

Australian Pulse Production	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
Lupin (ASL & Albus)	468,060	633,559	489,700	606,700
Field Pea	260,370	334,593	238,100	204,500
Chickpea (Desi & Kabuli)	464,740	564,916	661,300	1,013,000
Lentil	172,020	252,610	232,100	258,200
Bean (Faba & Broad)	181,880	338,112	306,700	343,700
Total	1,547,070	2,123,791	1,927,900	2,426,100

Pulse Production by State	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
New South Wales	394,120	517,897	453,200	718,900
Queensland	169,300	223,524	339,200	556,900
South Australia	360,100	549,950	451,900	492,400
Victoria	251,890	355,540	330,400	173,200
Western Australia	371,660	476,880	353,200	484,100
Total	1,547,070	2,123,791	1,927,900	2,425,500

Chickpea (Desi & Kabuli)	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
New South Wales	237,600	272,862	290,800	438,500
Queensland	167,800	220,894	338,000	555,000
South Australia	15,960	19,000	16,900	11,000
Victoria	36,680	45,760	12,900	5,300
Western Australia	6,700	6,400	2,700	3,200
Total	464,740	564,916	661,300	1,013,000

Field Pea	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
New South Wales	50,270	67,093	48,100	72,500
Queensland	-	-	-	-
South Australia	113,400	164,320	114,000	82,100
Victoria	47,440	60,920	54,000	20,600
Western Australia	49,260	42,260	22,000	29,300
Total	260,370	334,593	238,100	204,500

Faba/Broad Bean	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
New South Wales	39,680	84,372	50,000	129,300
Queensland	1,500	2,630	1,200	1,900
South Australia	76,360	135,120	122,000	133,000
Victoria	61,040	110,380	130,500	73,200
Western Australia	3,300	5,610	3,000	6,300
Total	181,880	338,112	306,700	343,700

Lupin	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
New South Wales	65,910	92,909	61,700	76,400
South Australia	61,860	83,360	68,000	61,300
Victoria	27,890	34,680	32,000	23,700
Western Australia	312,400	422,610	325,500	445,300
Total	468,060	633,559	487,200	606,700

Lentil	Average 2010/11-2014/15		2015/16 estimates	
	Area Planted (hectares)	Production (tonnes)	Area Planted (hectares)	Production (tonnes)
New South Wales	660	660	2,600	2,200
South Australia	92,520	148,150	129,500	205,600
Victoria	78,840	103,800	100,000	50,400
Total	172,020	252,610	232,100	258,200

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