

BIGG Soil Moisture Report – 12/11/20 Flaxman Valley, Keyneton, Koonunga, Moculta



Site Name: Keyneton (Landholder: Keynes)		
Legend	* 100.000 mm water	
KY PAW (1733) X 18.550 mm water 12/11/20 12:00:00 AM		
KY PAW Last Year (75.000 mm water -	
KY PAW 2 yrs ago (IIII X 1.967 mm water 12/11/20 12:00:00 AM	50.000 mm veter -	
	25.000 mm vater -	
	- 0.00 me water	tady M
	1/01/20 1/04/20	1/07/20 1/10/20
2020 rainfall (Apr-current)	385mm	Estimated soil moisture 30%
Soil type	Red loam over clay	
Pasture type	Annual grass and sub-clover based pasture	
Current pasture	Composition: Annual grasses (ryegrass, barley grass, silver grass, wild oats)	
status	95%, Dry surface litter 5%	
(see photos below)	Estimated Feed on Offer: 3300 kg DM/I	ha
2020 paddock and	From 15/9-29/10/20, 320 ewes separately grazed each of the three blocks	
grazing management	within the paddock (stocking rate 8-55 DSE/ha). From 3/11/20, 870 ewes have grazed the block that contains increased FOO (stocking rate 21 DSE/ha).	
Narrative	Rainfall to date at Keyneton is 120mm above that at the same time last year. Although the site started the season with a dry profile, the rain has allowed the profile to wet up and stay wet.	
	By this time in 2018 and 2019 the profile was dry, whereas currently it is still holding 1/3 of capacity. Another factor to consider is the difference in October weather, with this year being far cooler, without the long dry spells of 2018. Pasture production has increased and there is plenty of moisture to sustain growth.	

Site Name: Koonunga (Landholder: Kleinig)		
Legend KO PAW (1731) X 6.586 mm water 12/11/20 12:00:00 AM	* 100.000 mm water	
KO PAW Last Year () × 11.970 mm water 12/11/20 12:00:00 AM KO PAW 2 yrs ago () ×	75.000 mm water -	
12/11/20 12:00:00 AM	50.000 mm water -	
	25.000 mm water - 0.000 mm water - 0.0000 mm water - 0.00000 mm water - 0.0000000000000000000000000000000000	
2020 rainfall	401mm Estimated soil moisture _	
(Apr-current)	in the profile	
Soil type	Red brown earth	
Pasture/crop	Barley (sown in 2020)	
Current pasture	Composition: Barley plants 100%	
status (see photos below)	Estimated Feed on Offer: -	
2020 paddock and grazing management	Compass barley was sown on 26/5/20 with the paddock to be rept in December (expected yield 4.0t/ha). The paddock has not been grazed all season.	
Narrative	The PAW graph above paint a different picture to what the Koonunga soil probe is currently reading. Growing season rain is over 400mm compared to 230mm at this time last year however the probes are only showing 8% remaining moisture. What has caused this discrepancy?	
	The answer lies in an event that occurred in September, when the crop immediately around the probe site was laid down by strong winds. As a result, instead of infiltrating evenly, rain was running off, leaving the soil around the probe dry. This provides a good lesson in why we must be vigilant in ensuring that the probe site stays representative. If the probe were 2m further away, it would have shown a completely different and more realistic picture.	
	The best way to get a feel for what moisture levels across the paddock are really like would be to take out an auger or spade and dig up some soil samples so they can be assessed by hand. If the other sites are a guide, the profile is probably at 30 to 50% capacity.	

Site Name: Moculta (Landholder: Koch)		
Legend	× 100.000 mm water -	
MC PAW (37466) 21.223 mm water 12/11/20 12:00:00 AM MC PAW Last Year 7.395 mm water 12/11/20 12:00:00 AM	75.000 mm water -	
	50.000 mm water -	
	25.00 mm vater -	
2020 rainfall	1/01/20 1/07/20 1/07/20 1/10/20	
(Apr-current)	in the profile	
Soil type	Shallow clayey red brown earth over lime	
Pasture type	Native pasture	
Current pasture status (see photos	Composition: Annual/native grasses 35%, Capeweed 10%, Dry surface little 55%	
2020 paddock and grazing management	Over the last few months a mob of 400 ewes have been rotated through the paddock on a monthly basis for a period of 5-6 days (stocking rate 8 DSE/ha). On 5/11/12, 82 ewes were moved into the paddock where they will be set stocked until the end of December for mating.	
Narrative	In 2019 we set the estimate of PAW at the Moculta site to 35mm but this year have been able to lift it to 55mm. Available moisture has been above 2019 levels all season and the profile is at close to 50% capacity compared to 16% at the same time last year.	
	Bear in mind that even with this year's rains we have not seen the profile fill completely. We use changes in the separate level graph to indicate when the profile is full: as moisture at a level reaches saturation and starts to flatten out, any extra moisture received as rain drains quickly through the profile and is visible as a rapid increase in moisture on the next sensor down.	
	Last year we only really saw moisture increase down to 45cm whereas this year we have seen it get to 65cm. There is an added complication here in that the site is quite steep, so some water is always going to be lost to runoff down the slope - both at the surface and above any restrictive layers in the soil.	

Photo of weather station paddocks – 23/6/20 (left) and 11/11/20 (right)

Flaxman Valley (Evans)



Keyneton (Keynes)



Koonunga (Kleinig)



Moculta (Koch)



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