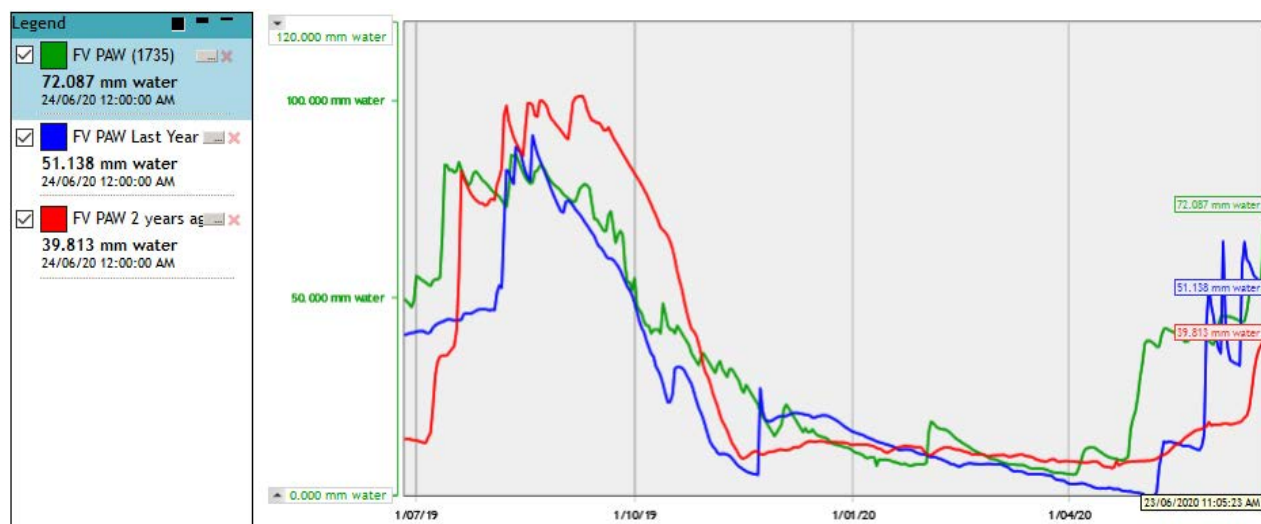


## BIGG Soil Moisture and Climate Data Report – 24/6/20

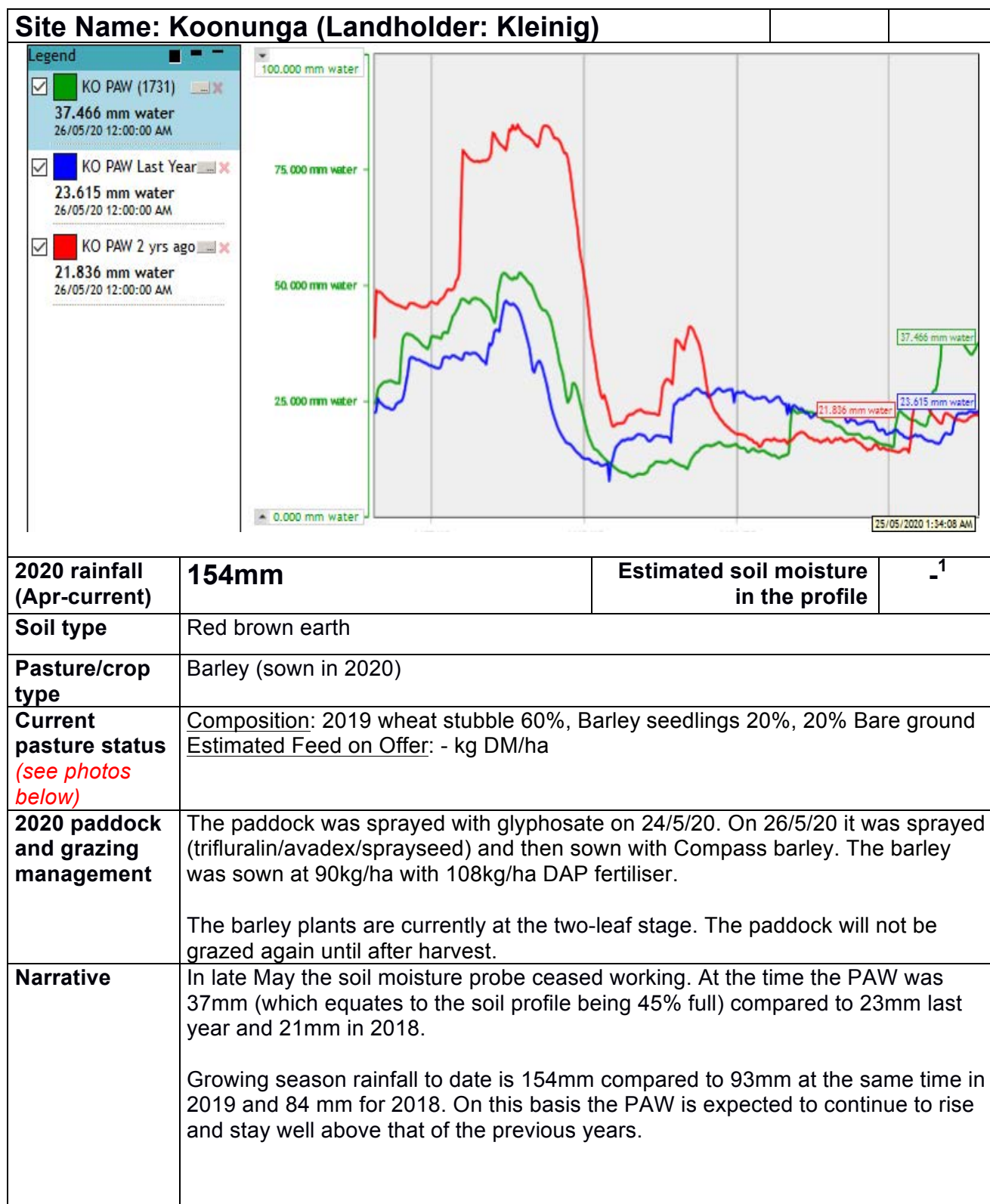
### Flaxman Valley, Keyneton, Koonunga, Moculta

**Site Name: Flaxman Valley (Landholder: Evans)**



<b>2020 rainfall (Apr-current)</b>	<b>168mm</b>	<b>Estimated soil moisture in the profile</b>	<b>64%</b>
<b>Soil type</b>	Sandy loam over clay		
<b>Pasture type</b>	Phalaris/annual grasses/clover based pasture		
<b>Current pasture status</b> <i>(see photos below)</i>	Composition: Phalaris 15%, Annual grasses 70%, Broadleaf weeds (dock, capeweed) 10%, Clover 5%		
	Estimated Feed on Offer (FOO): 1300 kg DM/ha		
<b>2020 paddock and grazing management</b>	On 25/5/20, 65 merino x border leicester ewes were moved into the paddock for lambing (stocking rate 23 DSE/ha).		
<b>Narrative</b>	<p>The graph shows the plant available water (PAW) for this year and the previous two years. The profile is currently holding 72mm compared to 51mm at the same time last year and 40mm in 2018. This reflects the improvement in the growing season rainfall to date: 168mm this year versus 103mm in 2019 and 119mm in 2018.</p> <p>From a growth viewpoint, the rain has also been well spaced during June: a few days of rain has been followed by a week of clear weather then another patch of rain; which means the pasture has plenty of dry days for growth. The NDVI sensors (which are a measure of 'plant greenness') are showing a value of 0.8, which is pretty much where they max out in this environment, so from this viewpoint, the pasture is as green as it is going to get.</p> <p>The BoM has recently announced that a La Nina event is forming which is likely to bring above average rains for the next few months. So the pattern of a good early break and promising early rain may be followed through winter and spring. This bodes well for pasture DM production.</p>		

<b>Site Name: Keyneton (Landholder: Keynes)</b>			
<div> <div> <b>Legend</b>  <input checked="" type="checkbox"/> <b>KY PAW (1733)</b>  21.058 mm water  24/06/20 12:00:00 AM  <input checked="" type="checkbox"/> <b>KY PAW Last Year</b>  11.440 mm water  24/06/20 12:00:00 AM  <input checked="" type="checkbox"/> <b>KY PAW 2 yrs ago</b>  12.018 mm water  24/06/20 12:00:00 AM </div> </div>			
<b>2020 rainfall (Apr-current)</b>	<b>135mm</b>	<b>Estimated soil moisture in the profile</b>	<b>35%</b>
<b>Soil type</b>	Red loam over clay		
<b>Pasture type</b>	Annual grass and sub-clover based pasture		
<b>Current pasture status</b> <i>(see photos below)</i>	Composition: Annual grasses 80%, Broadleaf weeds (erodium, capeweed) 10%, Phalaris 5%, Dry grass 5% Estimated Feed on Offer: 1400 kg DM/ha		
<b>2020 paddock and grazing management</b>	On 29/5/20, 313 merino ewes were moved into the paddock for lambing (stocking rate 10 DSE/ha). They are also being supplemented with barley (approx. 350gms/hd/day).		
<b>Narrative</b>	<p>Growing season rainfall to date for Keyneton is 135mm compared to the same 84mm for 2019 and 90mm in 2018. Interestingly the percentage of moisture in the profile does not show the same increase: 35% compared with 31% last year and 27% the year before.</p> <p>Looking at the NDVI figures gives a clue as to why this is so: the NDVI this year reached a value of 0.3 on the 10<sup>th</sup> of April whereas in 2019 it took until the 13<sup>th</sup> of May. The increased NDVI means an increase in daily water use. So there has been more rain this year, but more of it has been turned into dry matter rather than being stored in the profile.</p>		



<sup>1</sup>The Koonunga soil moisture probe has ceased working and will soon be replaced.

<b>Site Name: Moculta (Landholder: Koch)</b>			
<div> <div> <b>Legend</b>  <input checked="" type="checkbox"/> MC PAW (37466)  28.078 mm water  24/06/20 12:00:00 AM  <input checked="" type="checkbox"/> MC PAW 2 years a  <input checked="" type="checkbox"/> MC PAW Last Year  12.590 mm water  24/06/20 12:00:00 AM </div> </div>			
<b>2020 rainfall (Apr-current)</b>	<b>165mm</b>	<b>Estimated soil moisture in the profile</b>	<b>80%</b>
<b>Soil type</b>	Shallow clayey red brown earth over lime		
<b>Pasture type</b>	Native pasture		
<b>Current pasture status</b> <i>(see photos below)</i>	Composition: Grasses 70%, Broadleaf weeds (capeweed, erodium) 25%, Clover 5% Estimated Feed on Offer: 400 kg DM/ha		
<b>2020 paddock and grazing management</b>	The ewes moved into the paddock for lambing on 26/3/20 continue to graze the paddock, including being supplemented with cereal grain.  Lambs from the mob were recently tailed.		
<b>Narrative</b>	<p>Moculta has recorded nearly twice as much rain this growing season to date as it received last year. This shows up in the PAW value, which is currently 28mm compared to 13mm at the same time in 2019. Further, the rain started three weeks earlier so the pasture started to grow earlier in the season.</p> <p>The Moculta <a href="#">Separate Level graph</a> shows that the rain has only reached down to the 35cm level and there has been no increase yet at 45cm and below. Last month we were hoping to see some evidence of rain reaching 45cm but the early start to the rain has seen the pasture kick off and start to use plenty of water. The fact that the 35cm sensor rose and then started to draw down each day is a good sign as it shows we have plenty of root activity at that depth.</p> <p>So we still need to wait for more rain to test our theory on slide slope movement (i.e. due to a lime layer at 50cm below the surface, there may be a tendency for water to pool at this depth and then run down the hillside rather than penetrating deeper). That would also give us confirmation as to how appropriate our estimate of the PAW capacity at this site is.</p>		



**Photos of weather station paddocks – 18/5/20 (left) and 23/6/20 (right)**

**Flaxman Valley (Evans)**



**Keyneton (Keynes)**



**Koonunga (Kleinig)**



**Moculta (Koch)**



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