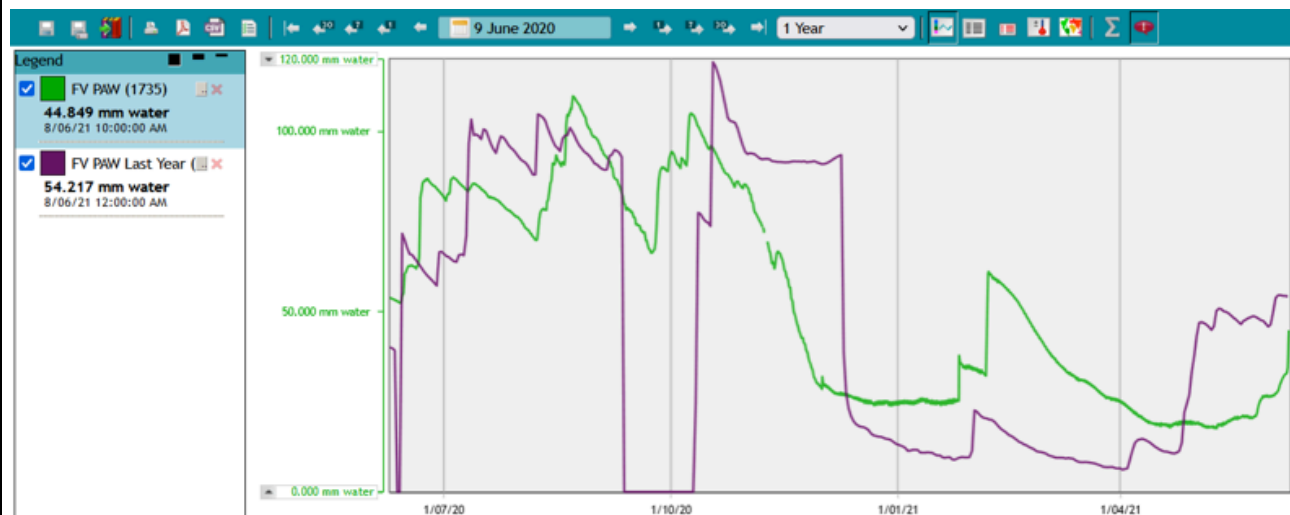


BIGG Soil Moisture Report – 8/6/21


Flaxman Valley, Keyneton, Koonunga, Moculta

Site Name: Flaxman Valley (Landholder: Evans)



2021 growing season rainfall (Apr-current)	69mm	Estimated soil moisture in the profile	43%
Soil type	Sandy loam over clay		
Pasture type	Phalaris/annual grasses/clover based pasture		
Current pasture status <i>(see photos below)</i>	Composition: Phalaris/cockfoot 25%, Annual grasses (ryegrass, barley grass) 15%, Broadleaf weeds 20% (dock, capeweed) Clover 5%, Dry litter 35% Estimated Feed on Offer (FOO): 1700 kg DM/ha		
Recent paddock and grazing management	The paddock has not been grazed for four months to ensure there is adequate FOO at lambing. Eighty pregnant ewes will go into the paddock later in the month. In early June the paddock was fertilised with 175kg/ha of 'Pasture Restorer-Plus' (4.0-4.4-2.3-7.2) from Hi-Tech Ag Solutions.		
Narrative	<p>The picture this year for many agriculture districts is that of a late season break. Year to date growing season rainfall is 69mm compared to 120mm this time last year. The month of May was even grimmer, with a deficit of 80mm in the 3rd week of the month. This was reflected in the Plant Available Water (PAW) being 20mm less than at the same time (3rd week of May) last year. With vegetation sparse and the soil surface dry, evaporation losses were higher than they would be in a wet year.</p> <p>This week saw the arrival of the first batch of real winter weather, with strong winds and plenty of rain. Last week's rain brought the first real rise in soil moisture, providing good conditions for this rain to infiltrate quickly: moisture levels are already increasing down to 60cm. If the rain continues, the gap between last year's PAW and this years could disappear quite quickly. So keep a watch on the soil moisture to see if the PAW graph keeps kicking up.</p>		

Site Name: Keyneton (Landholder: Keynes)			
			
2021 growing season rainfall (Apr-current)	48mm	Estimated soil moisture in the profile	25%
Soil type	Red loam over clay		
Pasture type	Annual grass and sub-clover based pasture		
Current pasture status <i>(see photos below)</i>	Composition: Annual grasses (ryegrass, barley grass) 20%, Phalaris 5%, Broadleaf weeds (geranium) 5%, Dry litter 65%, Bare ground 5% Estimated Feed on Offer: 1800 kg DM/ha		
Recent paddock and grazing management	From 28/3-20/4/21, 80 twin-bearing ewes grazed the paddock (including being fed some supplementary barley). Since 1/6/21, 380 ewe hoggets have grazed two of three sections of the paddock.		
Narrative	<p>Like Flaxman Valley, the growing season rainfall comparison for this site is also stark: currently 48mm compared to 106mm this time last year.</p> <p>But given the size of the rain difference, you may well ask why is the difference in PAW is only 5mm?</p> <p>The reason is because the rains in January and February were captured and not used, meaning that the PAW never dipped below 20mm over summer and autumn. This week has already brought 26mm of rain and so far it is being held in the top 20cm, with more rain needed to penetrate further down.</p>		

Site Name: Koonunga (Landholder: Kleinig)			
 <p>Legend</p> <ul style="list-style-type: none"> KO PAW (1731) 10.537 mm water 8/06/21 12:00:00 AM KO PAW Last Year 47.889 mm water 8/06/21 12:00:00 AM <p>The graph displays two data series: 'KO PAW (1731)' (green line) and 'KO PAW Last Year' (purple line). The y-axis represents water level in mm, ranging from 0.000 to 100.000. The x-axis shows dates from 1/07/20 to 1/04/21. The current year's water level is consistently lower than the previous year's, with a significant drop in late 2020 and early 2021.</p>			
2021 growing season rainfall (Apr-current)	60mm	Estimated soil moisture in the profile	13%
Soil type	Red brown earth		
Pasture/crop type	Barley and clover		
Current pasture status (see photos below)	<p>Composition: Crop stubble 85%, Bare ground 15%.</p> <p>Estimated Feed on Offer: -</p>		
Recent paddock and grazing management	<p>In 2020 the paddock was sown to a barley crop and in November it was rept, yielding 5.0t/ha.</p> <p>From 2-8/1/21 the paddock was grazed by 255 ewes/rams and from 3/4-9/5/21 by 145 wethers/dry ewes.</p> <p>This year the paddock returns to a pasture phase of the rotation and on 24/5/21 it was sown to oats/barley at 55kg/ha plus a mix of clovers (Seaton Park, Trikkala, Antas, Dalsa, Cavalier medic) at 10kg/ha. DAP fertiliser (18:20:0) was applied at 65kg/ha.</p>		
Narrative	<p>Growing season rainfall to the end of May is 80mm behind the previous year's figure, while the PAW is about 38mm lower. This becomes even more stark when you compare the percentage of available water: this time last year the profile was at 56% of capacity, compared to 13% at present. Which means we need a lot of rain to even catch up, let alone get ahead.</p> <p>With the season break skipping both April and May, we can only hope that the rest of winter delivers on its promise of an above average rainfall.</p>		


Site Name: Moculta (Landholder: Koch)			
			
2021 growing season rainfall (Apr-current)	45mm	Estimated soil moisture in the profile	33%
Soil type	Shallow clayey red brown earth over lime		
Pasture type	Native pasture		
Current pasture status <i>(see photos below)</i>	<u>Composition:</u> Annual/native grasses 15%, Dry litter 65%, Bare ground 20% <u>Estimated Feed on Offer:</u> 500 kg DM/ha		
Recent paddock and grazing management	In late March 75 ewes were moved into the paddock for lambing. The ewes have been supplemented with grain and hay and will remain in the paddock until August.		
Narrative	<p>The rainfall deficit at Moculta is even more marked than at the other 3 sites: with May ending nearly 100mm below last years figure. But the site did finish the previous season with 30% available water. The 18mm of rain received this week has brought the top 10cm of the profile near to saturation and water is pushing down to 30cm. If you get a chance to look at the site data, have a good look at the Stacked graph, as it provides a very good indication of whats happening.</p> <p>The slope at this site means that heavy showers cause runoff quite quickly and for good infiltration, we need slow, soaking rains - which at the moment is what is being delivered.</p> <p>Take a look below at the site pictures (May 2020 vs June 2021) to confirm this for yourself. The Moculta image looks more like January than June. The take home from this is that there has been no grass growth at all for the last couple months. So dry matter potential is going to be significantly reduced when compared to what it would have been had the rains come earlier. The tip now is to watch the NDVI (Normalised Different Vegetation Index) and PAW graphs: the NDVI should jump as the grasses kick off and the PAW should climb as we capture more of the rain. And as the grasses grow there is less chance of runoff so a greater share of rain being captured in the soil.</p>		

Photo of weather station paddocks – 18/5/20 (left) and 2/6/21 (right)

Flaxman Valley (Evans)



Keyneton (Keynes)



Koonunga (Kleinig)



Moculta (Koch)



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