

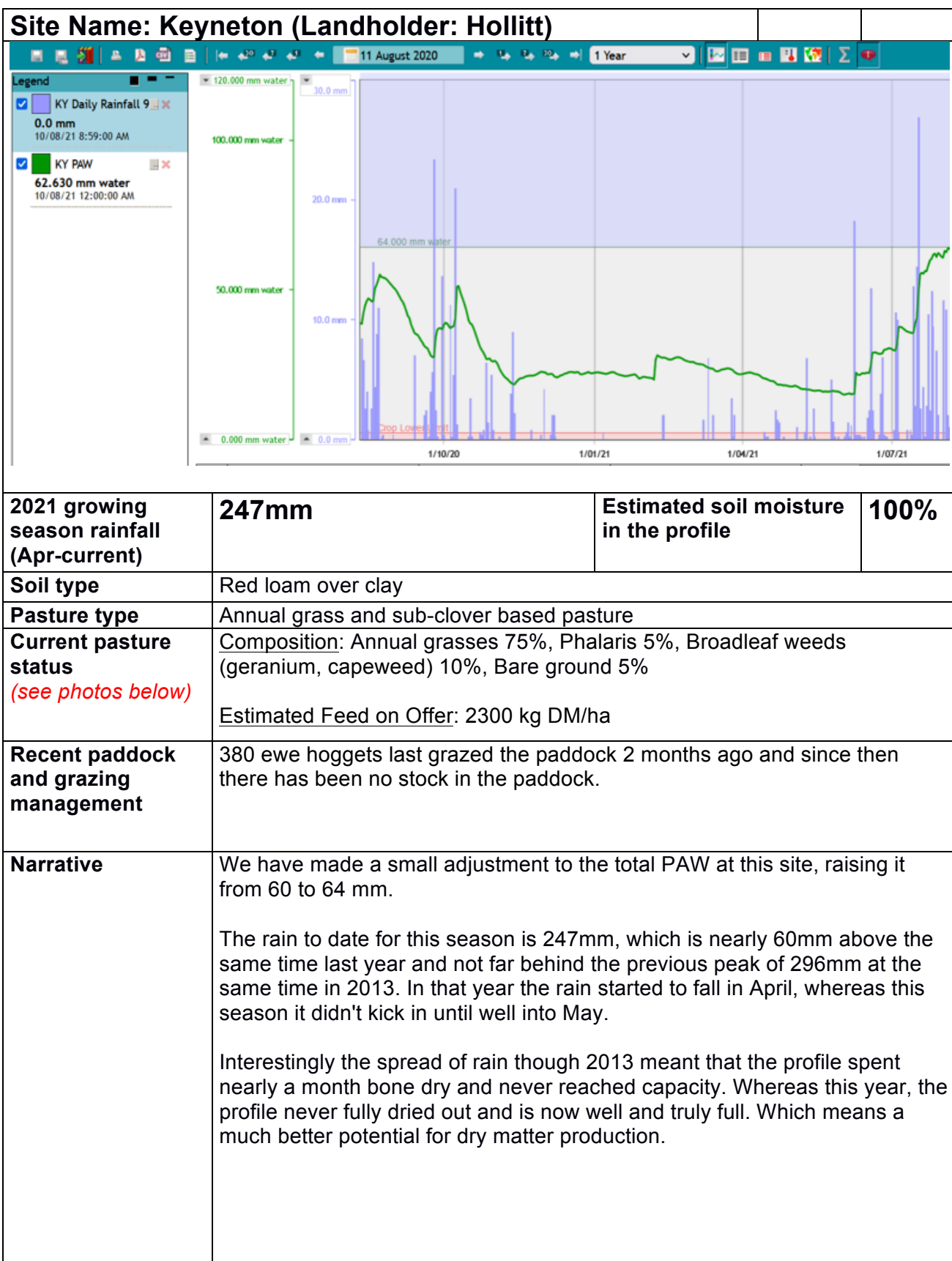
BIGG Soil Moisture Report – 10/8/21

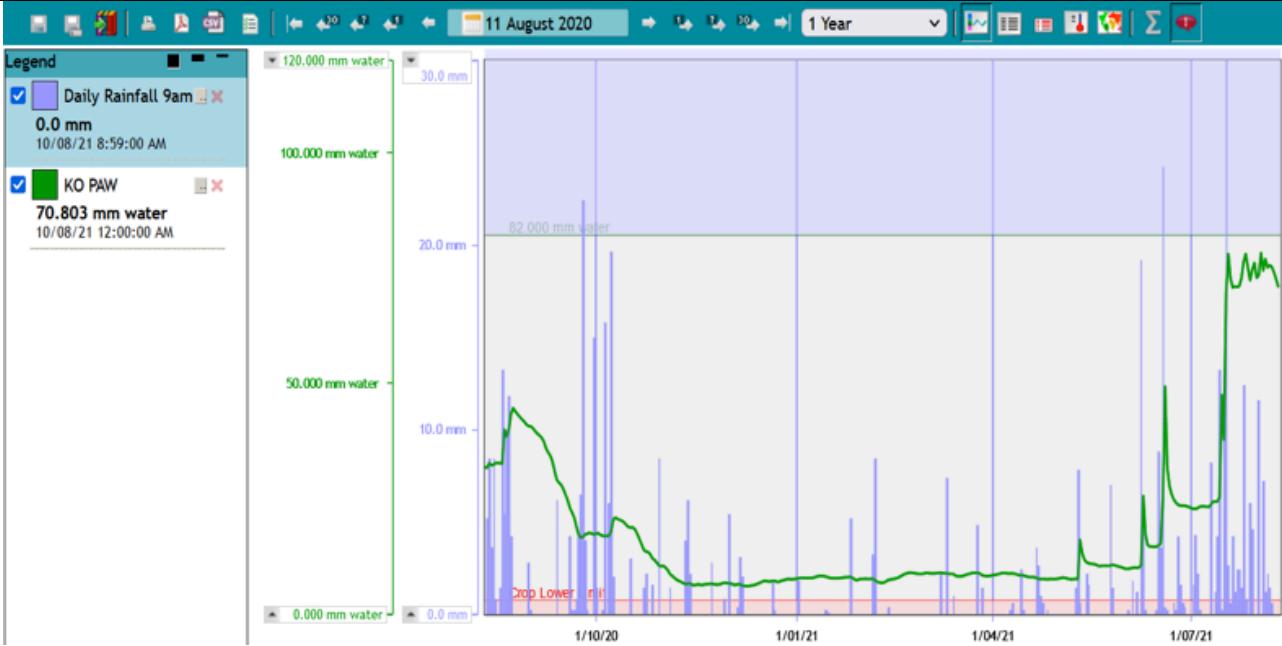
Flaxman Valley, Keyneton, Koonunga, Moculta

Site Name: Flaxman Valley (Landholder: Evans)



2021 growing season rainfall (Apr-current)	360mm	Estimated soil moisture in the profile	100%
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 40%, Annual ryegrass 55%, Capeweed 5%		
	Estimated Feed on Offer (FOO): 1000 kg DM/ha		
Recent paddock and grazing management	On 15/6/20, 70 ewes were moved into the paddock for lambing. They will soon be moved out.		
Narrative	<p>Even though this site has been running since 2013, we have had to increase our estimate of the plant available water (PAW) this season (For BIGG's soil moisture sites, PAW is an estimate of the total amount of moisture that plants can access in the 15-85cm soil profile).</p> <p>Rain to date this growing season is 150mm above that for the same time last year and only the 2014 growing season has seen a higher amount (455mm). That year finished with 624mm of rain and it is going to be interesting to see what our full year total will be.</p> <p>The profile is now completely full and any additional rain is being lost as either runoff or through drainage. Runoff is not a bad thing, as it is filling the on site dam, which has been dry for a while.</p> <p>The battery in the telemetry unit on this site is deteriorating and the unit is dropping out at night, which is impacting on our data collection. A new battery will be fitted shortly.</p>		



Site Name: Koonunga (Landholder: Kleinig)			
			
2021 growing season rainfall (Apr-current)	251mm	Estimated soil moisture in the profile	84%
Soil type	Red brown earth		
Pasture/crop type	Oats/barley and clover		
Current pasture status <i>(see photos below)</i>	Composition: Cereals 30%, Ryegrass 5%, 2020 crop stubble 55%, Bare ground 10%. Estimated Feed on Offer: 300 kg DM/ha		
Recent paddock and grazing management	In May the paddock was sown to a pasture mix of oats/barley/clover and on 28/6/21, 36 ewes were moved into the paddock for lambing. Initially the mob mostly accessed green pick from the non-arable areas of the paddock (i.e. creek line, rocky areas). They have also been supplementary fed with grain and some hay.		
Narrative	<p>Growing season rainfall at Koonunga is 60mm above the same time last year, but still well below the 468mm received at this time in 2016. Although the season break in 2016 was also late, the rain kept falling right into summer.</p> <p>Unlike the sites examined so far, Koonunga has not hit capacity. It did so back in 2016 and again in 2017. The reason for this is that in those years, the site started with "more in the tank", whereas at the start of this season, that tank was pretty empty. Checking the individual soil moisture levels (the Separate Level Graph) shows plenty of up and down movement after rain events: soil moisture increases with rain and then falls as water is used. When the soil reaches saturation, the data becomes much less dynamic and tends to flatten out. The probe at this site is 120cm long instead of the 80cm units installed at the other sites. The 95 to 125cm sensors are all flat lining, indicating saturation - with this occurring after the rain events in mid July. But the sensors above them are not, indicating that the pasture is actively using moisture from the upper levels. If the rain continues, the profile should finally fill.</p>		


Site Name: Moculta (Landholder: Koch)			
			
2021 growing season rainfall (Apr-current)	227mm	Estimated soil moisture in the profile	100%
Soil type	Shallow clayey red brown earth over lime		
Pasture type	Native pasture		
Current pasture status <i>(see photos below)</i>	Composition: Annual/native grasses 80%, Broadleaf weeds (geranium, capeweed) 20% Estimated Feed on Offer: 500 kg DM/ha		
Recent paddock and grazing management	In late March 75 ewes were moved into the paddock for lambing, where they have remained since. They will soon be moved out, as the ewes are due to be shorn.		
Narrative	<p>As the newest site, we don't have the long history of data on Moculta given it was installed in April 2019. The growing season rainfall to date is 227 mm, which is 20mm or so above last year and 50mm above the year before.</p> <p>We have had to raise our estimate of the PAW this season as a result of the extra rain. What is most significant is that the PAW today is nearly double what it was at the same time last year. More water was retained in the profile over summer and, although good rains did not arrive until June, they have been consistently high ever since.</p> <p>As a result, we have more moisture in the profile than we have seen before. Dry matter levels are currently low, but as the weather warms, should start to build as they tap into the reserves of moisture.</p>		

Photo of weather station paddocks – 2/6/21 (left) and 6/8/21 (right)

Flaxman Valley (Evans)



Keyneton (Hollitt)



Koonunga (Kleinig)



Moculta (Koch)



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