



### **Informed decisions for managing climate variability in grazing systems**

**Background;** PPS were successful in the Federal Govt “Smart Farms Small Grants Round 3” funding program, allowing it to commence a pasture growth estimate project which will report throughout spring. This year PPS were successful in gaining funding from a Wimmera CMA Landcare Victoria grant to continue the project.



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### **Project:**

Perennial Pasture System (PPS) has an existing soil moisture and temperature probe network providing daily readings of soil conditions. These are currently presented as weekly graphs and in seasonal summaries of soil moisture availability. Agriculture Victoria has access to the CSIRO "Grass Gro" computer simulation program which can be used to predict pasture growth by combining various sources of information including local historic climate and soil moisture availability. The project proposes to have analysis of predicted pasture growth for spring? for the region using the above tools and into an easily understood visual format to assist farmer decision making in grazing systems in the variable climate conditions that are now part of the region's farming systems.

*Three sites? regions are being used in the predictions & it is hoped that they will assist in providing trigger points for action in dry years and help with planning pasture management in average and above average spring rainfall seasons.*

**The project estimates are being collated by Jane Court; Agriculture Victoria & Dr Nathan Robinson; CeRDI, Federation University. PPS thanks them for their assistance with this project.**



**Note: The soil moisture summed graphs used for these reports are not comparable between sites as they use a different scale on the y axis due to local conditions.**

## PPS Soil moisture – October 2023

Pasture predictions have been made for 3 sites based on soil moisture on 20<sup>th</sup> October. These are modelled predictions for perennial/clover based pastures that are grazed.

Pasture growth predictions are provided for October to the end of 2023 (noting that October is only for the last week and a half), with rainfall (based on historic 1982-2023) at 10, 30 and 50 weather deciles.

All sites are drier than the last report, as pastures have been drawing on soil moisture, given inadequate October rain to replenish.

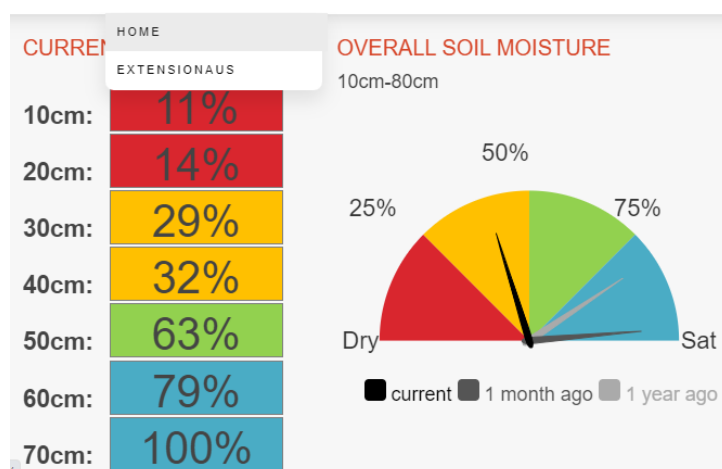
### Tottington

The Tottington site continues to deplete moisture down the profile. This is shown in the snapshot from the extensionaus website for late October below.

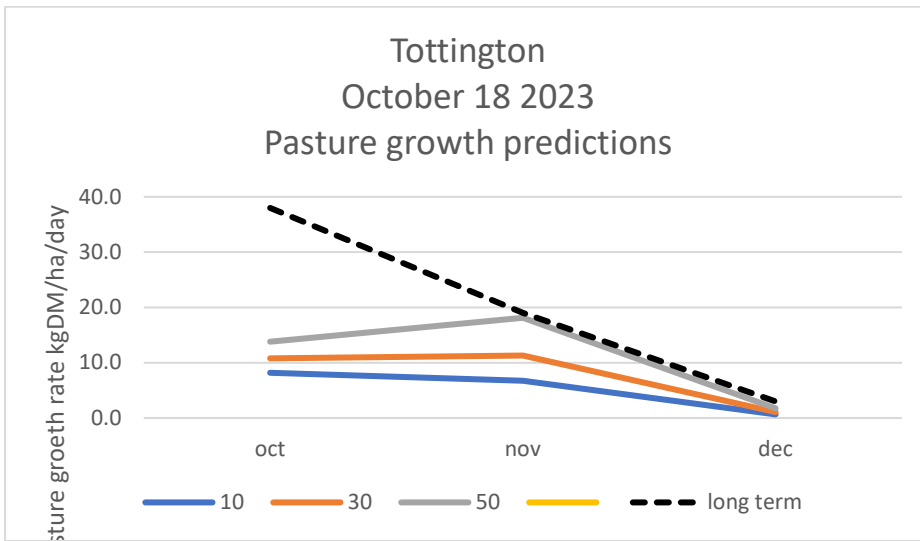
#### Grass clover pasture at Beazleys bridge (8 km north)



#### October 20th



Pasture Predictions (with rainfall for 10, 30, 50 and 70 weather deciles plus the long term average)



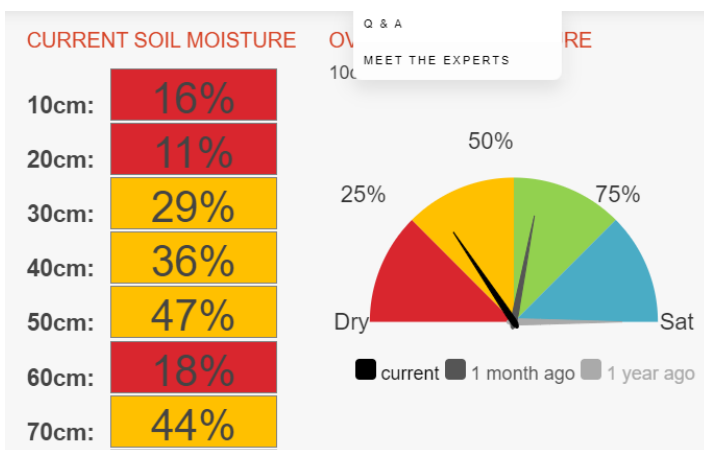
**Comments from Tottington; Tom Small**

It was drying out before 20mm in the first week of October. Annuals are going to head a bit earlier than usual and some of the clover is flowering but perennials are looking ok. Been a good year so far but we will finish pasture growth a bit quicker than usual.

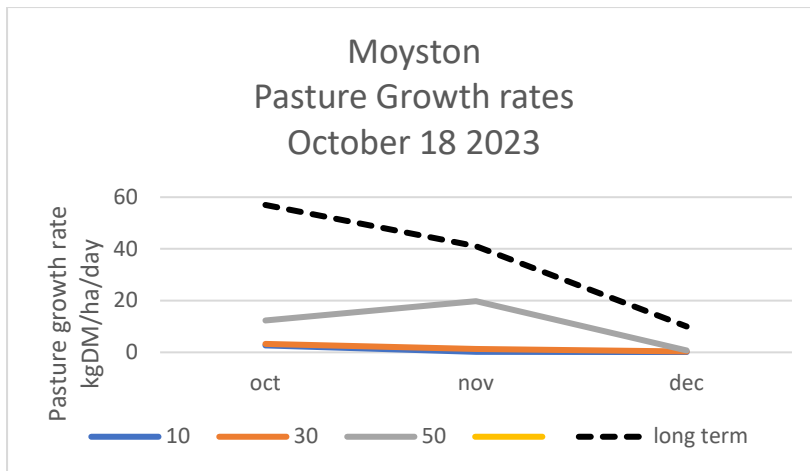
**Moyston**

The Moyston site is drier to depth than other sites with very low soil moisture down most of the profile.

**October 20<sup>th</sup>**



Pasture Predictions (with rainfall for 10,30, 50 and 70 weather deciles plus the long term average)



**Comments; Moyston (Barton Station); Rob Cooper**

Good season until September, we took the opportunity to trade in ewes, cows & weaner steers to use autumn winter feed.

Things dried up in September & I estimate that pasture growth is only 60% of average so far in spring. We have plans in place for this situation & implemented them after the first Informed Decisions data confirmed our expectations of the rest of spring.

We have started selling weaner cattle and all mutton sheep have been moved on to market. The concentration is now on getting weight on breeding stock and setting up for a dry summer.

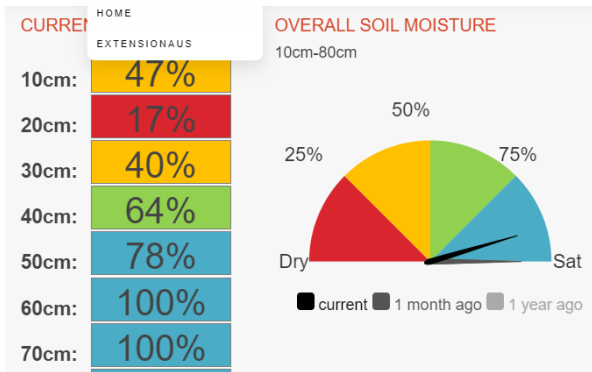
**Stawell**

Stawell is now drawing down strongly on moisture due to lack of rain, and is now quite dry in the topsoil and depleting down to about 50cm.. Indications are that pasture has been growing strongly as it uses the moisture, and close to long term average for October (note the graph only includes the last week and a half as starts from October 17<sup>th</sup>) but growth rates look to drop considerably. Stawell BOM site recorded 25mm for October.

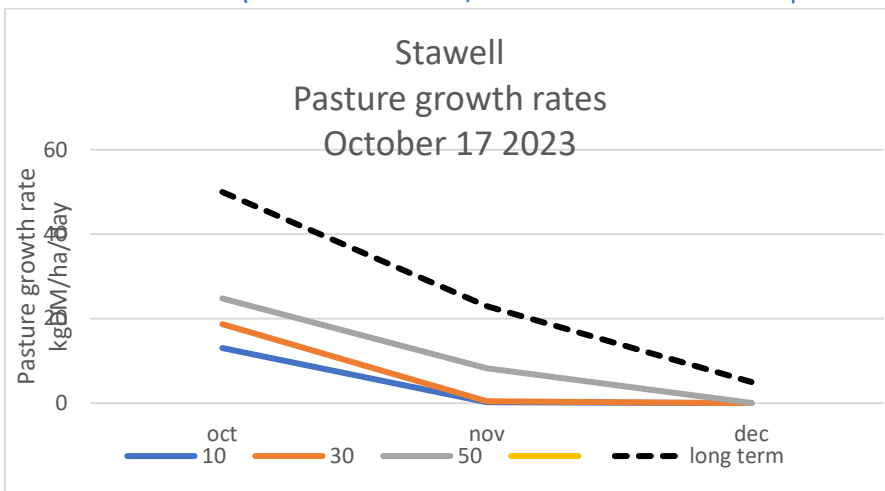
**Pasture at Stawell**



20 Oct 2023



Pasture Predictions (with rainfall for 10,30 and 50 weather deciles plus the long term average).



**Comments from Lake Lonsdale (Stawell); Matt Kindred**

12mm of rain in early October but the signs of a dry spring are starting to become obvious especially on lighter soils. Annuals are going to head and not growing much & a wheat crop is showing signs of moisture stress.

The soil moisture probe near the wheat paddock shows the dry 20 cm level which is not allowing roots to access any moisture below.

