



Local Land  
Services  
South East

# Harnessing the power of soil moisture data

Frogmore, 13 March 2020

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# Types of decisions

## ***Tactical Decisions:***

*Within-season decisions regarding livestock demand versus feed supply*

## ***Strategic decisions:***

*Decisions with longer time-frames & can influence what tactical decisions are possible*

*Source:* Badgery et al 2019 “Developing a framework for tactical decision making to address feed deficits”

# Tactical decisions

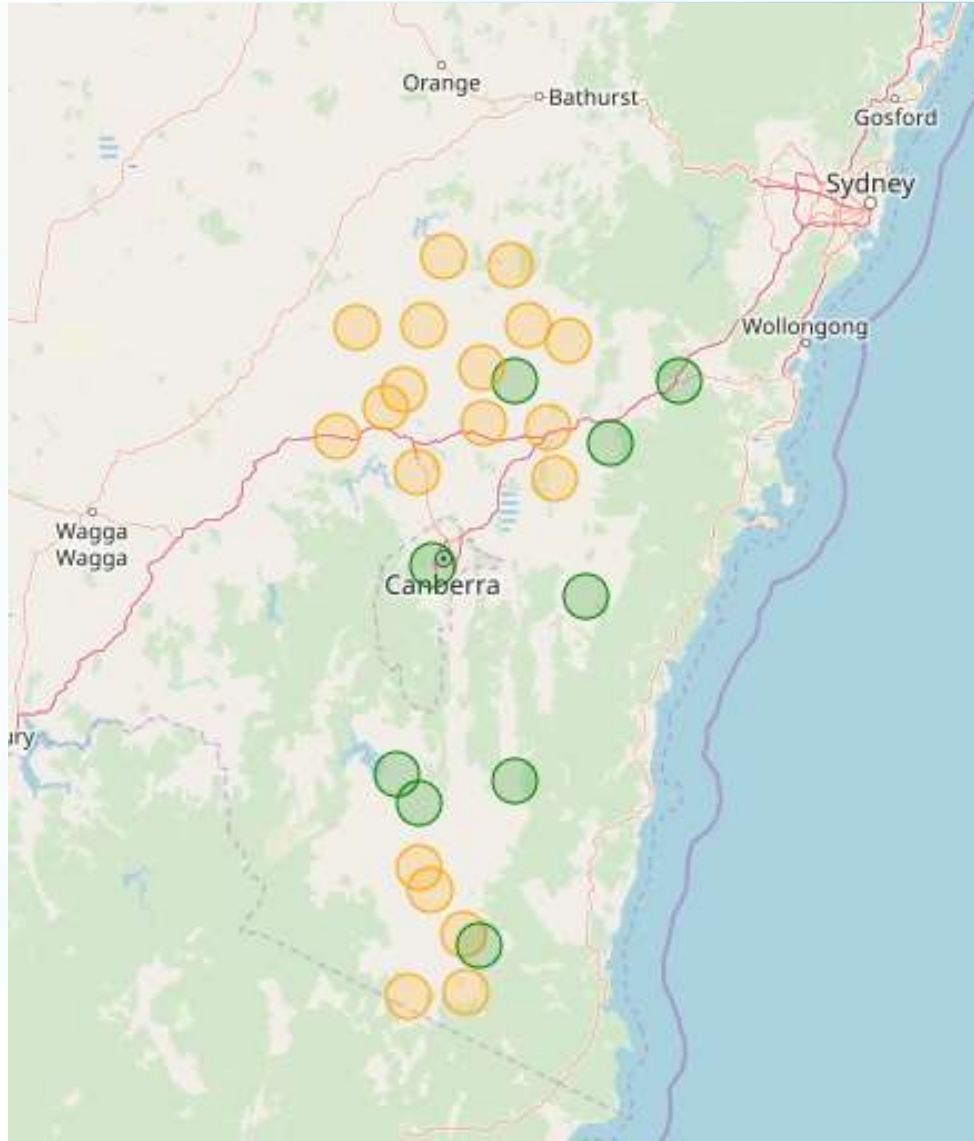
What do they assess?

- pastures for quality and quantity
- animal condition and growth rates
- animal requirements
- market information
- agistment availability
- fodder stored (silage and hay)
- financial position
- rainfall records
- **soil moisture probe information**
- forecasts – but only a general guide
- total grazing pressure (rangelands)



Source: Badgery et al 2019 “Developing a framework for tactical decision making to address feed deficits”

[soilmoistureprobes.com.au](http://soilmoistureprobes.com.au)





# 14 Aug 2019

## BOOROWA

Property "Geegullalong"

"Geegullalong" is located 11km north of Boorowa on the Lachlan valley way and is part of Merryville merino stud managed by George and Wal Merriman. Apart from stud merinos we are a commercial wool growing business plus Angus and poll Hereford cattle and prime lambs. The soil moisture probe is located on the mid slope of granite based country and is now part of an internal laneway system.

**Annual rainfall:** 613mm

**Altitude:** 565mm

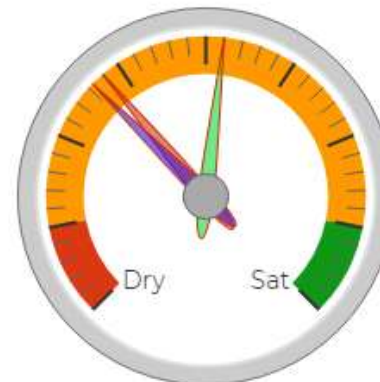
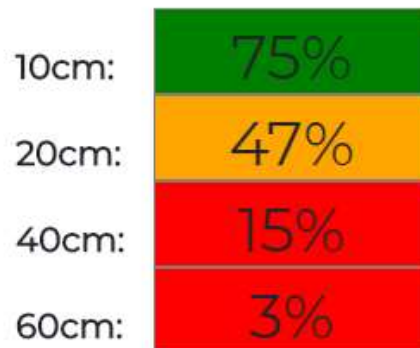
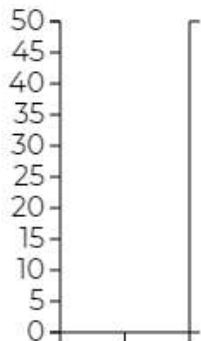
**Soil type:** Parna overlying granite

(refer to Soil section for further detail)



## INTERACTIVE GRAPH

It may take a few seconds to load all the data



■ less than a minute ago

■ about 1 month ago

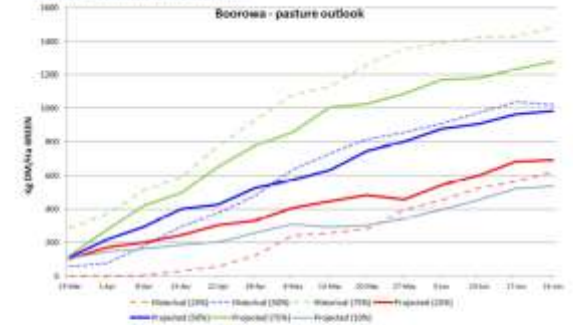
■ about 1 year ago

# Seasonal outlook – spring 2019



## Boorowa

Self-replacing merino flock, TBA DSE



- Due to the good rainfall in late February this site starts the projection period slightly above the "50% historical level of green feed" (dotted blue line), however moisture levels at the end of March were starting to severely restrict plant growth. This is evident by the early separation of the solid lines.
- The projections are indicating that there is a high likelihood that the next 3 months will be wetter than we would regard as a "normal" range, however April rainfall will determine how difficult winter will be.
- It is unlikely that unusual stock decisions will need to be made. Some supplementary feeding might be required but that is not unusual for this time of year.

Compiled by:

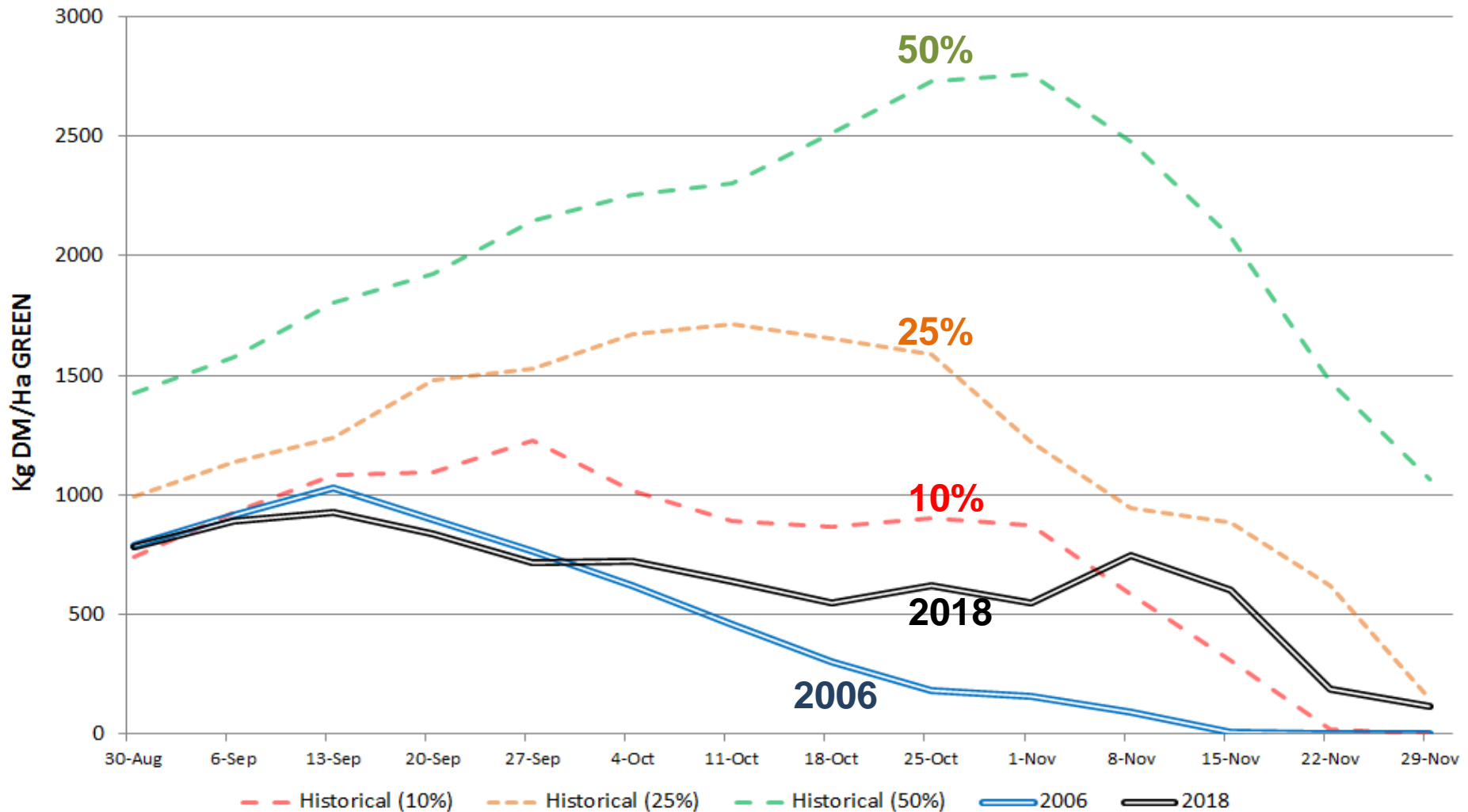
Matthew Lieschke, Senior Agriculture Advisor, South East Local Land Services

Phil Graham, Graham Advisory

September 2019

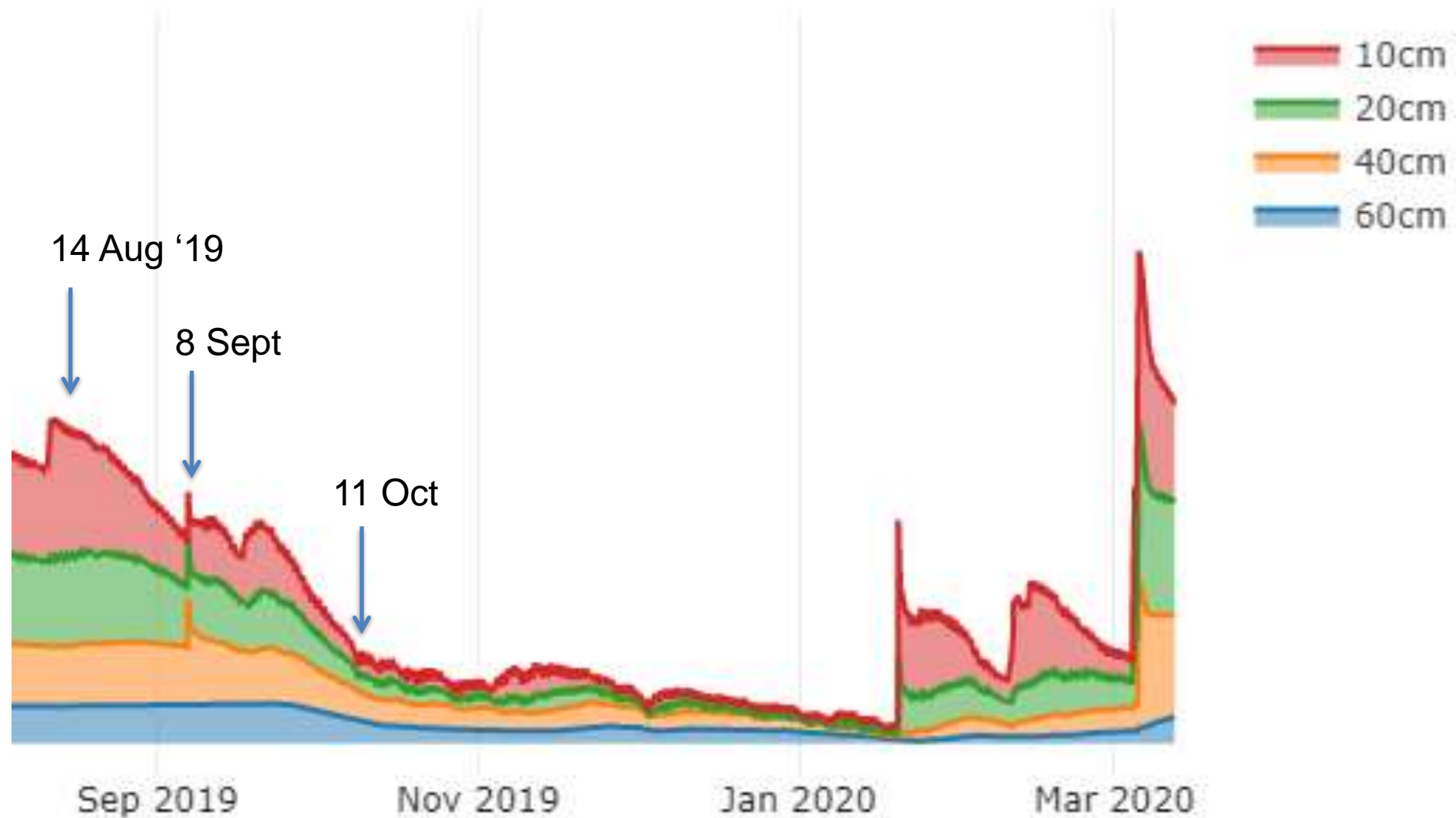
Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing September 2019. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Local Land Services or the user's independent adviser.

# Boorowa pasture outlook – spring 2019



# BOOROWA

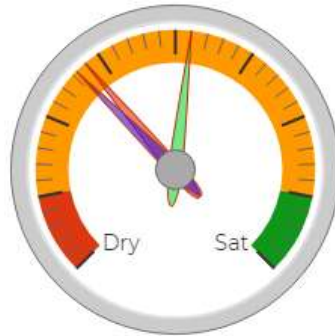
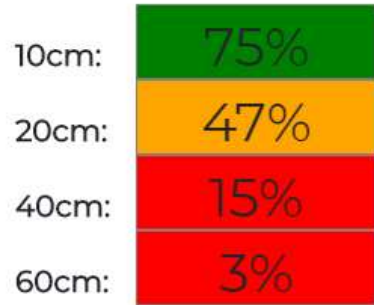
## SOIL MOISTURE



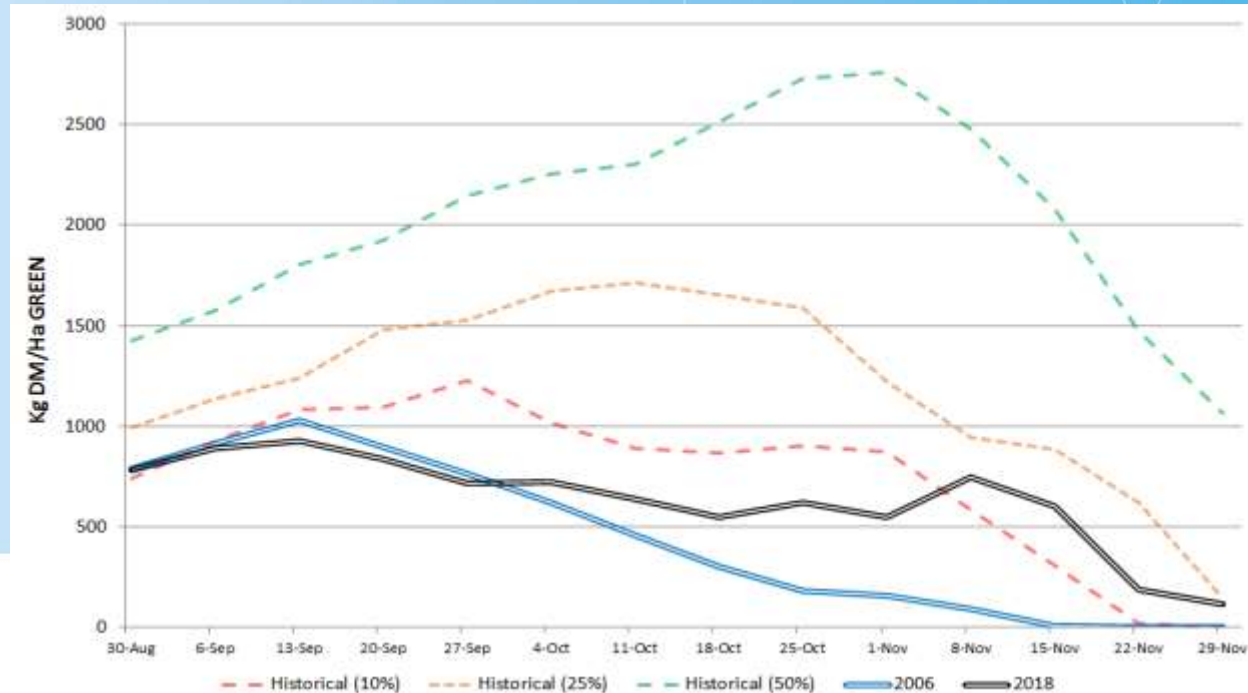


## INTERACTIVE GRAPH

It may take a few seconds to load all the data

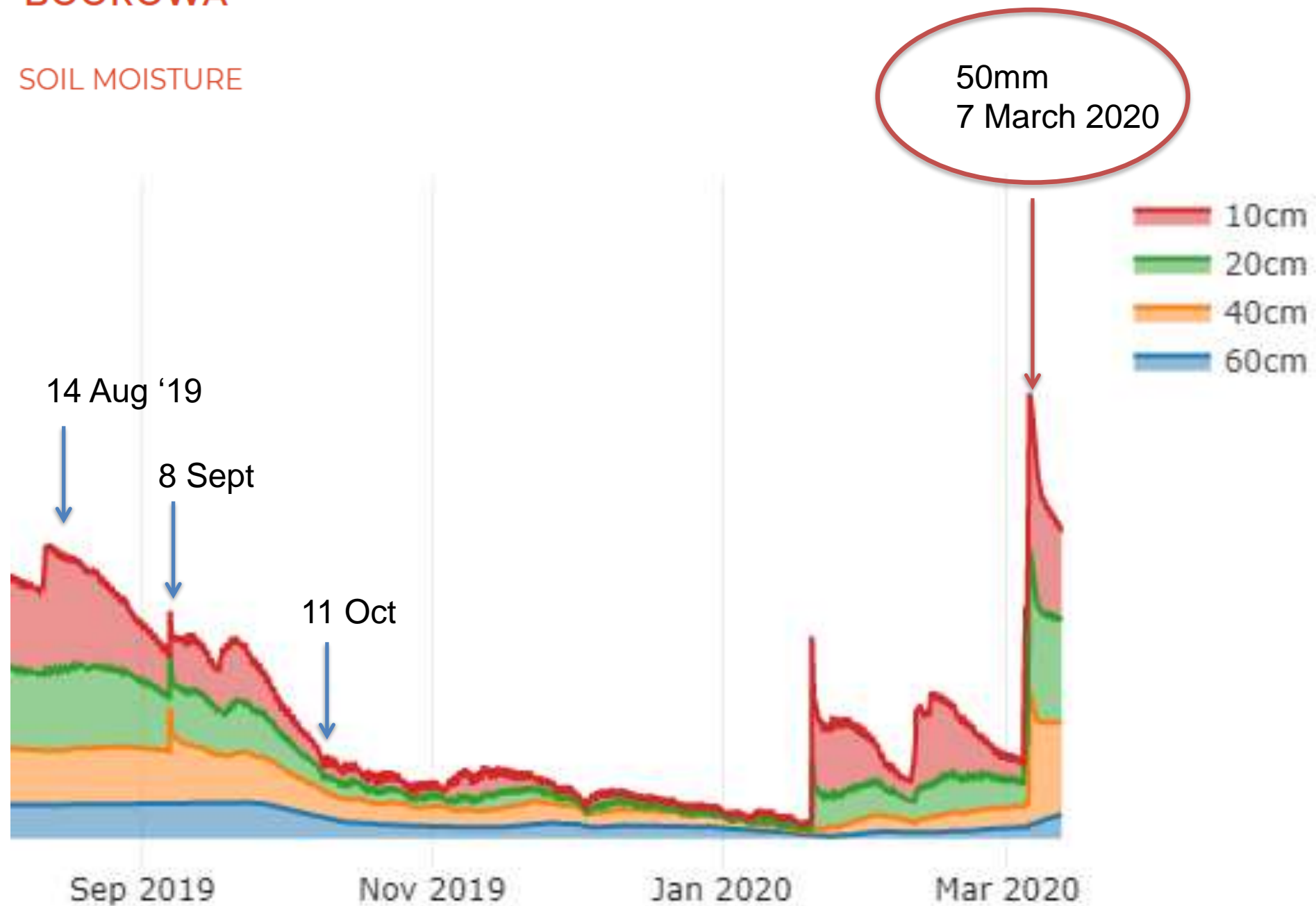


- less than a minute ago
- about 1 month ago
- about 1 year ago



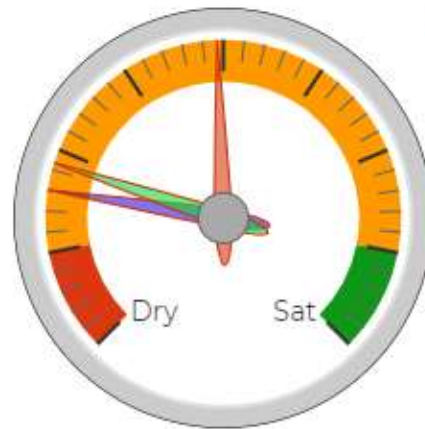
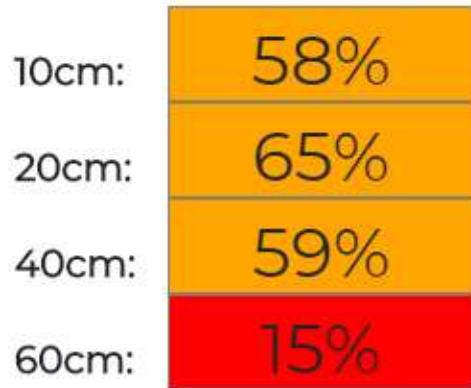
# BOOROWA

## SOIL MOISTURE



# What does the moisture look like now?

## Boorowa



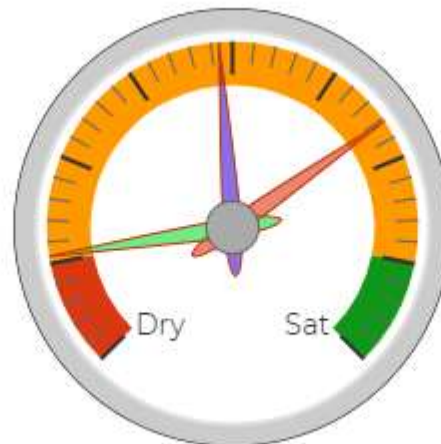
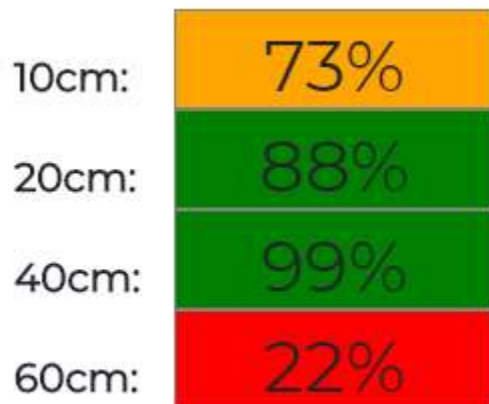
■ current soil moisture (0 - 60cm)

■ 1 month ago

■ 1 year ago

Feb: 57mm  
Mar: 53mm  
**Total: 110mm**

## Bowring



■ current soil moisture (0 - 60cm)

■ 1 month ago

■ 1 year ago

Feb: 67mm  
Mar: 67mm  
**Total: 134mm**

# New website coming soon...

## Probe

Last update: 15 minutes ago

### Soil Moisture

|      |     |                  |
|------|-----|------------------|
| 10cm | 19% | 7 days<br>▲ 3%   |
| 20cm | 48% | 30 days<br>▲ 15% |
| 40cm | 33% | Year<br>▼ 27%    |
| 60cm | 12% |                  |

[View Network](#)

## Pasture Forecast

Last update: 12 days ago

Bukaling

### Soil Temp

@ 10cm  
12.8

Since 9am  
0mm

Yesterday  
0.2mm

### Green Available Herbage

[More Details](#) [More Details](#) **Current growth** 40 kg/ha/day

## Important Notice

Last update: 2 days ago

### This is a headline of an announcement that is trying to grab the users attention

Lorem ipsum dolor sit amet, est in inani concludaturque. Eum et dolorum accusas, cu has putant inermis appellantur. Eu accusam argumentum sit. Vis recusabo interesset ut. Qui ne falli discere partiendo, minim aequae ei eum, id regione democritum philosophia sed...

[Read More](#)

[More Notices](#)

## Weather Forecast

Last update: 15 minutes ago

Bombala

|       | Chance of Rain | Rainfall | Rainfall | Warnings |
|-------|----------------|----------|----------|----------|
| Today | 30%            | 0-0.2mm  | 1-19°C   |          |
| Fri   | 80%            | 2-6mm    | 2-18°C   |          |
| Sat   | 90%            | 5-10mm   | 4-20°C   |          |
| Sun   | 40%            | 0-1mm    | 6-23°C   |          |
| Mon   | 40%            | 0-2mm    | 11-23°C  |          |
| Tue   | 10%            | -        | 6-16°C   |          |
| Wed   | 5%             | -        | 4-17°C   |          |

[More Details](#)