



FARMING FORECASTER

Dynamic data to improve pasture and grazing decisions to avoid over grazing

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Farming Forecaster



Probe

Last update: 39 minutes ago

Soil Moisture

10cm	100%
20cm	100%
40cm	100%
60cm	100%

Change

7 days — 0%

30 days ▲ 13%

Rainfall

Soil Temperature



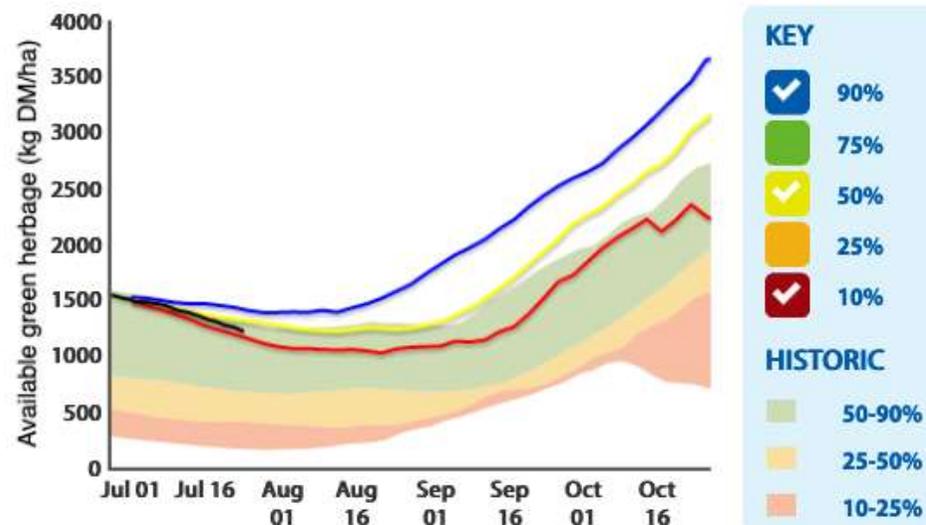
Pasture Forecast

Last Update: 3 days ago

Bannister

Provided by CSIRO

Projected green herbage available relative to historic variation



Weather Forecast

Last Update: 3 hours ago

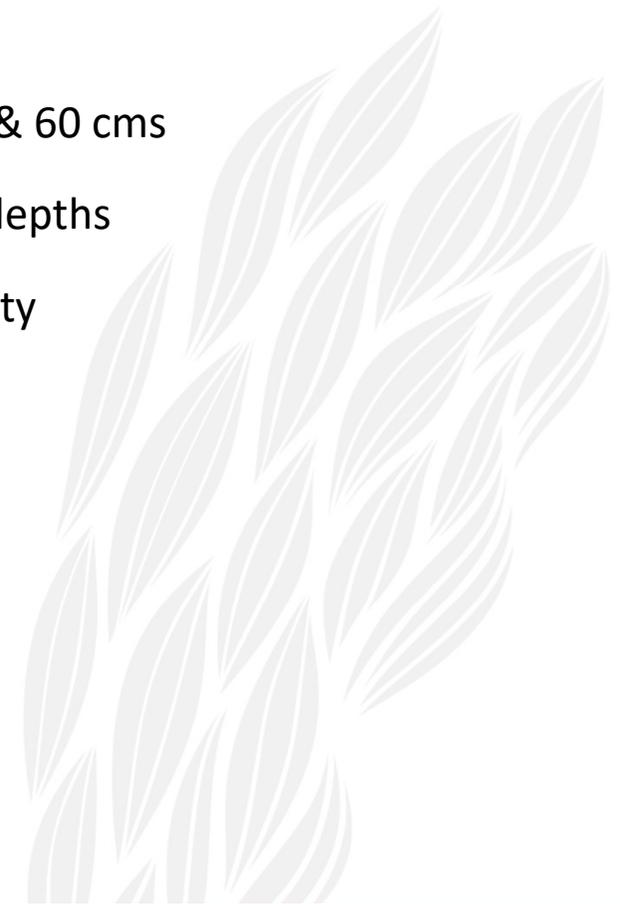
Provided by CSIRO [Some data on this app. is sourced from the Bureau of Meteorology.](#)

	Chance of Rain	Rainfall	Temperature	Warnings
Today	20%	0.2mm	4-11°C	 1183
Wed	84%	5mm	0-11°C	 1299
Thu	17%	0.2mm	-3-8°C	 1188
Fri	4%	0.1mm	2-11°C	 1122
Sat	15%	0.2mm	7-13°C	 1143
Sun	89%	7mm	3-15°C	 1243
Mon	53%	3mm	3-9°C	 1184

[More Weather Forecast Detail](#)

Real Time Information on:

- Soil moisture at 10, 20, 40 & 60 cms
- Soil temperature at these depths
- Predicted pasture availability
- Livestock performance



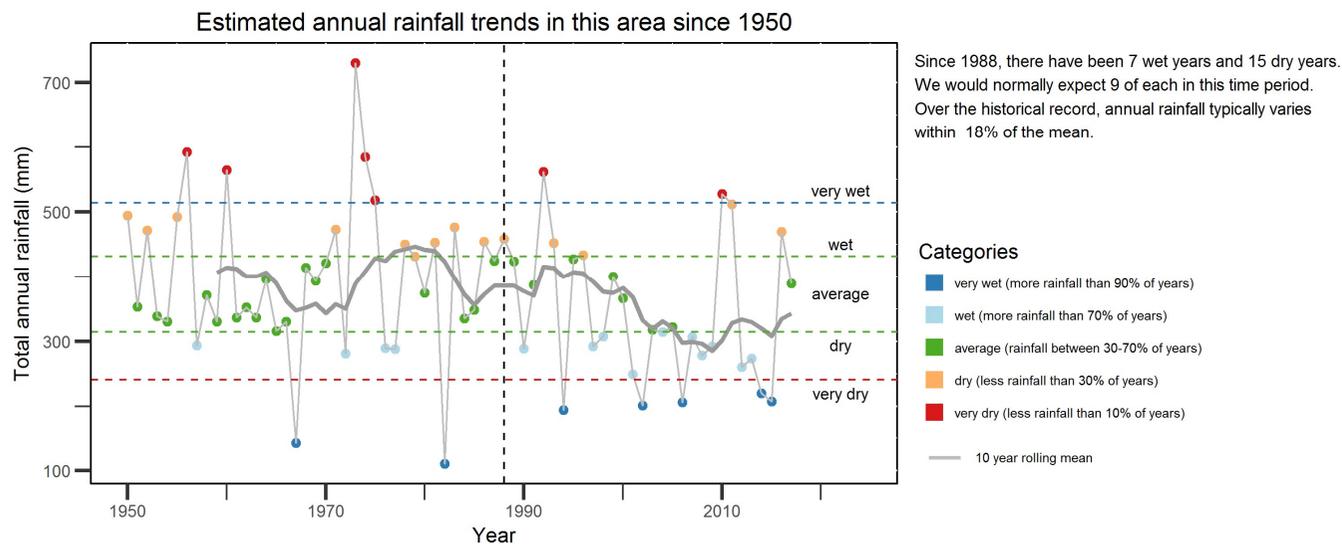


Understanding how we manage current climate variability...



<https://img.wikinut.com/img/1pp8.gkc52b1apt9/jpeg/0/chess.jpeg>

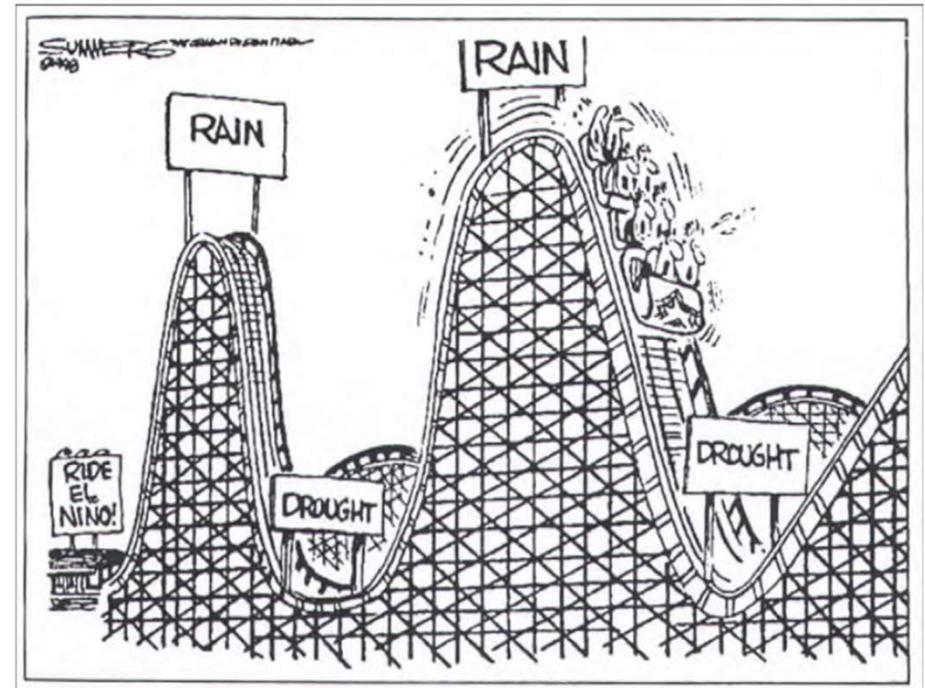
Chess or pokies?



MANAGING LANDSCAPES THROUGH MANAGING CLIMATE VARIABILITY



- Seasonal variability can be managed with better information on what's coming up...**forecasting**
- There is no crystal ball but we can shift the odds
- In livestock systems this means **confidence** in stocking decisions, managing cover, timely feed budgeting



Forecasting seasonal conditions in livestock systems

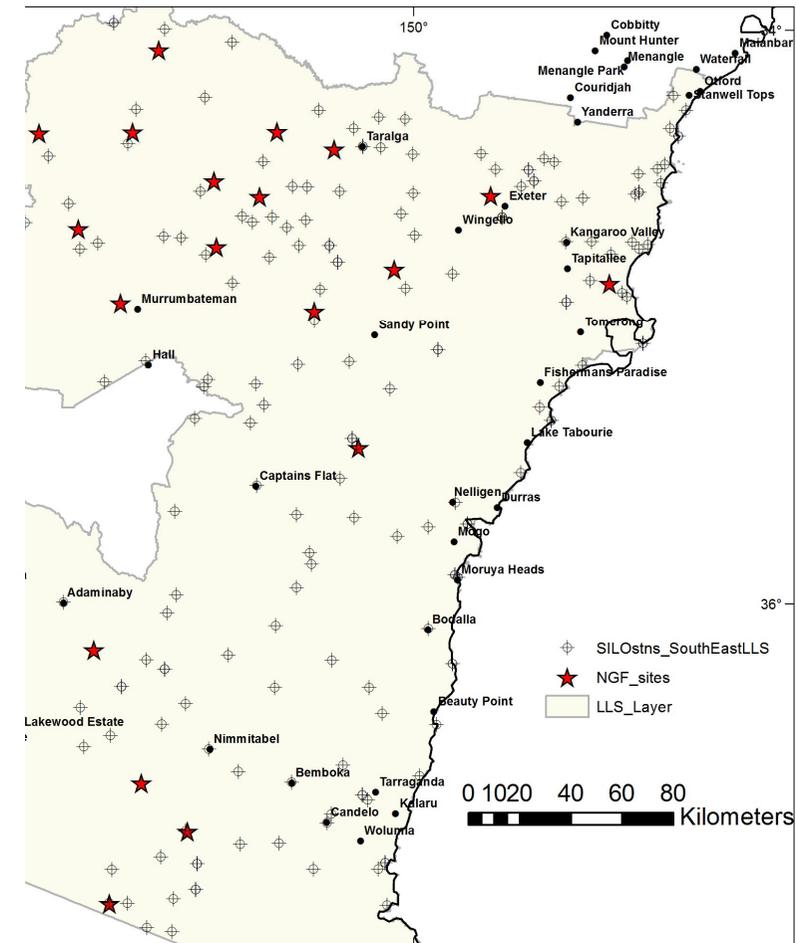


- **What?** Simulation models can translate **past, current and future** weather patterns into farm relevant features e.g. pasture growth
- **How?** combine local knowledge with simulation modelling to build a 'live' forecasting system
- **Why?** reduce the uncertainty in decision-making leading to more pro-active behaviour.



Next Generation Forecasting project

- Co-developed with extension/consultants, farming groups and UX/software developers
- Deliver real-time, localised pasture forecasts that will complement their soil moisture probe network and weather data.
- Site-based forecasts used as 'sentinels' for producers to gauge seasonal conditions.



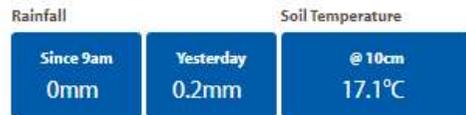
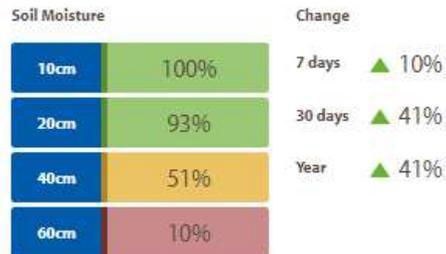
Informed digital agriculture

- Agronomy, extension and UX specialists informing tool development
- Understanding decision framework of different farmers
- Probabilistic information is tricky! Translating visual information into text



Probe

Last update: Monday 7:00 PM



[View Network](#) [More Probe Details](#)

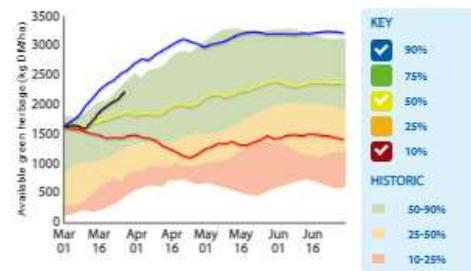
Pasture Forecast

Last Update: 3 days ago

Bibbenluke

Provided by CSIRO

Projected green herbage available relative to historic variation



Current Growth (modelled) 42 kg/ha/day

[More Pasture Detail](#)

Member Updates

Last update: 17/08/2020 1:37 PM



Introduction to Farming Forecaster

This video provides a basic overview of Farming Forecaster, including how to access the tool and general layout of information.

[Read More](#)

Weather Forecast

Last update:

Provided by CSIRO (Some data in the app is sourced from the Bureau of Meteorology)

	Chance of Rain	Rainfall	Temperature	Warnings
Today	3%	0mm	4-17°C	
Tue	0%	0mm	5-18°C	
Wed	1%	0mm	6-20°C	
Thu	1%	0mm	9-24°C	
Fri	0%	0mm	11-26°C	
Sat	0%	0mm	11-28°C	



- Site usage: >30,000 visitors
- >30 locations
- Quick overviews of key variables versus detailed analysis
- All in one place!

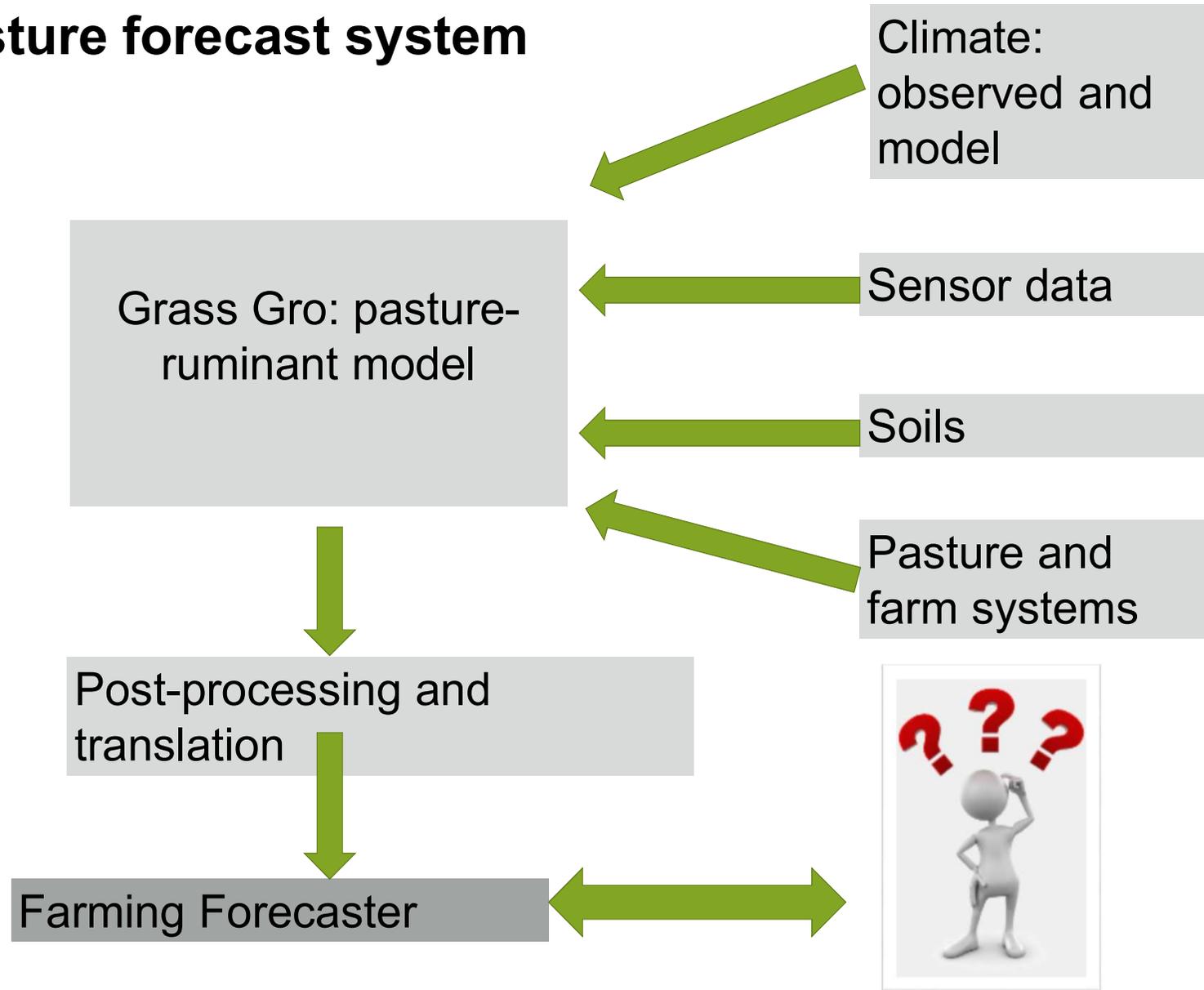
<https://www.farmingforecaster.com.au/>

Addressing multiple management questions



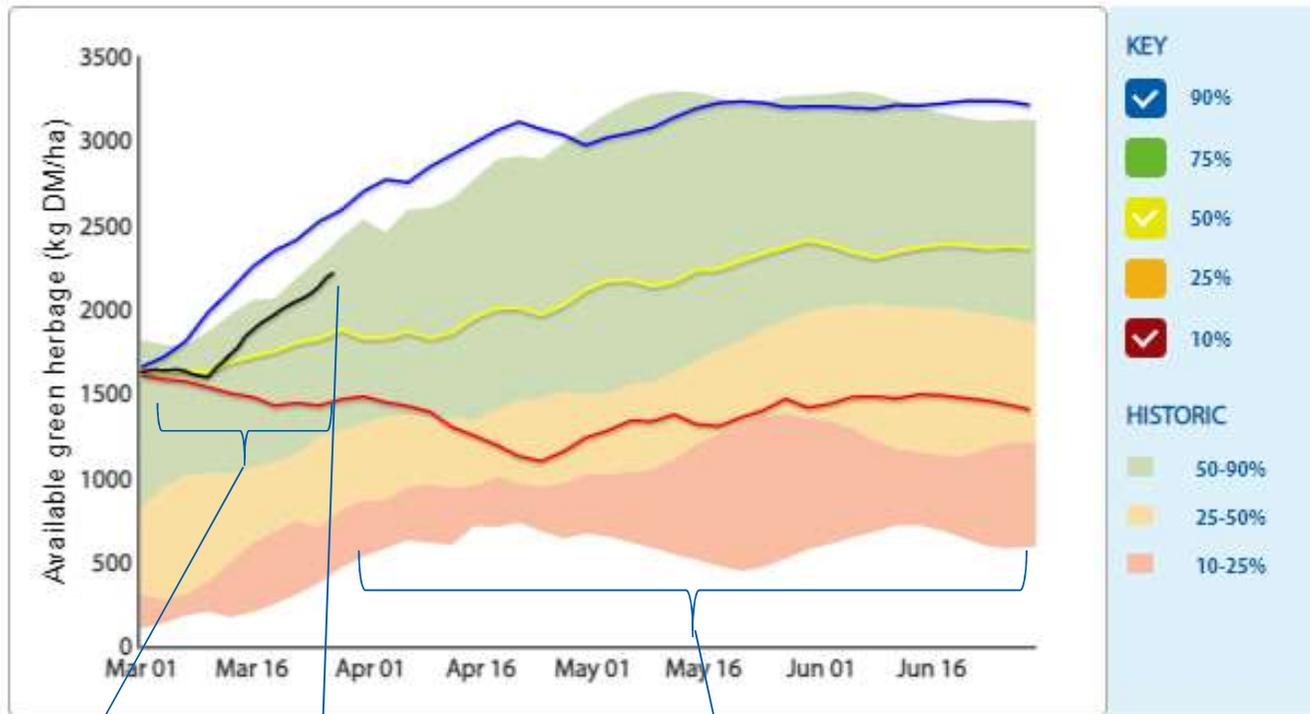
Management question	Timescale	Farming Forecaster
How much soil water is available for pasture growth?	Current/past seasons	Visualised as relative moisture content at different depths
How much rain has my area received?	Current/past seasons	Daily and monthly rainfall summaries
Will I get average pasture growth this season?	Seasonal (1-4 months)	Four-month probabilistic forecast of green available herbage
How likely are cold conditions for lambs?	1-7 days	Next 7-day sheep chill index

Dynamic pasture forecast system





Projected green herbage available relative to historic variation



Past month

Current

Season ahead

Current Growth (modelled)
42kg/ha/day

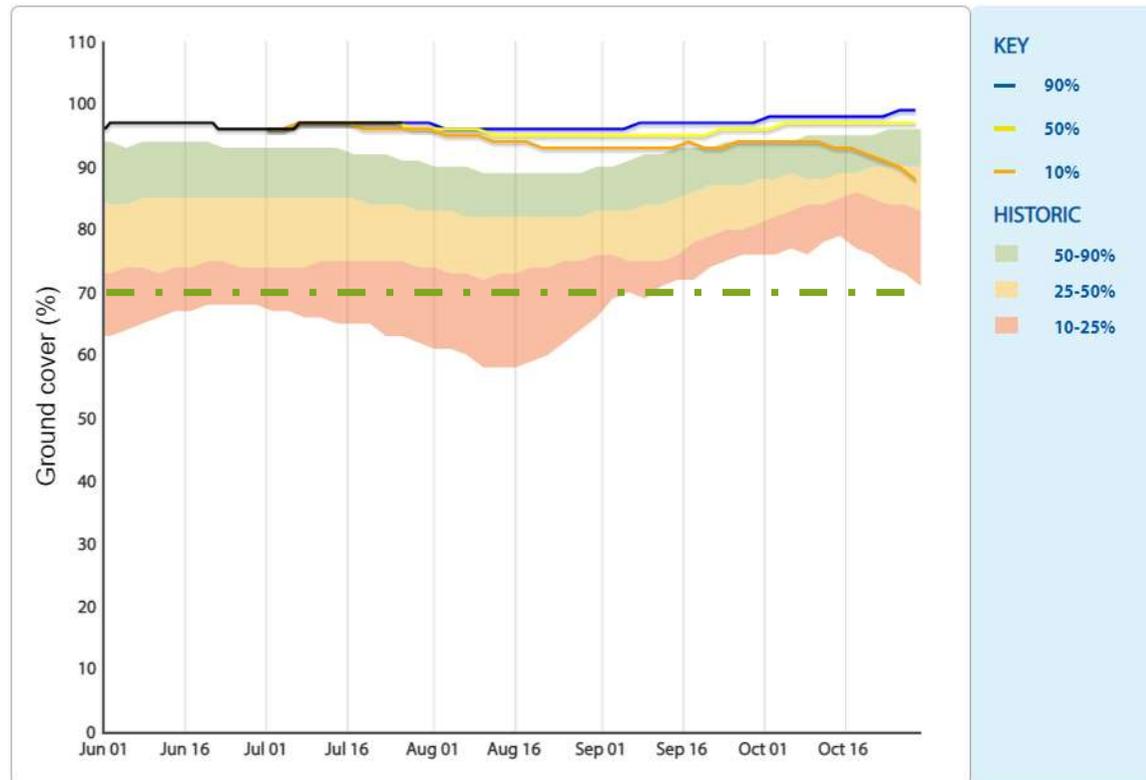
Summary

- Currently tracking in top 25% of years on record
- Poor conditions until June 29 will result in pasture availability in the bottom 50% of years on record
- Average conditions will see pasture availability in the top 50% of years on record
- Really good conditions will see pasture availability in the top 10% of years on record

PASTURE MANAGEMENT



Ground Cover



Current Ground Cover

98%

Chance of falling below the minimum ground cover target (if no changes are made)

0%

Summary

- Ground cover should be managed carefully and maintained at over critical level of 70% to prevent erosion
- Current ground cover of 98% is greater than the minimum ground cover target
- There is a low risk (0% chance) of dropping below this level



Future directions



- Farming Forecaster acts as a blueprint how we deploy tools for livestock decisions elsewhere
- Support the roll-out to other regions
- Use sustainable business model to avoid 'shelfware'
- Expand the modelling capacity: farmer's weather stations, improved forecasts, including drought lot feeding.

WWW.FARMINGFORECASTER.COM.AU

The Farming Forecaster logo, featuring a bar chart with a green leaf and the text "Farming Forecaster".

NSW GOVERNMENT | Local Land Services

TFS Tablelands Farming Systems
Next Generation Agriculture

MFS
MONARO FARMING SYSTEMS

Square V

CSIRO

Australian Government | National Landcare Program

Managed by a consortium comprised of Monaro Farming Systems, South East Local Land Services, Tablelands Farming Systems and Bookham Ag Bureau through funding from the Australian Government's National Landcare Program.