

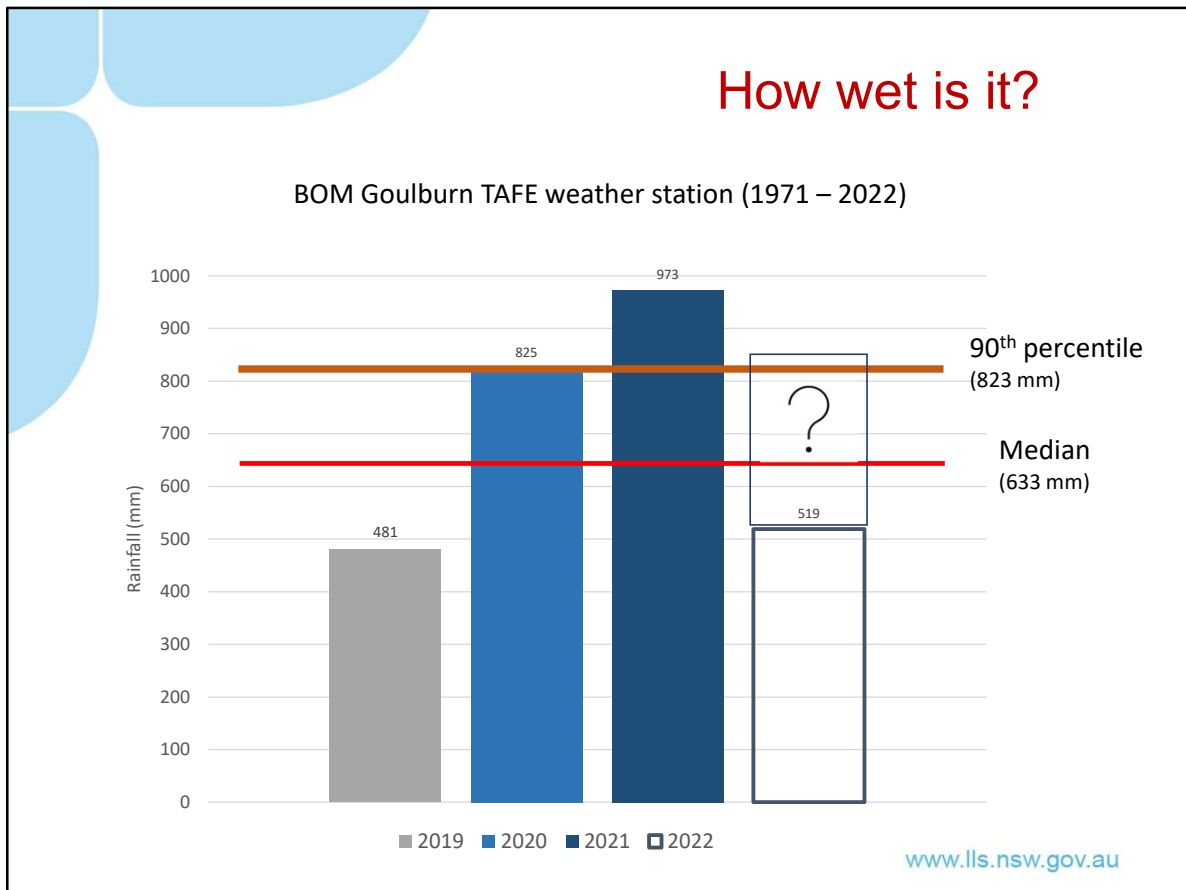
TFS Seasonal update

16 June 2022

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Since the drought broke in early 2020 we have had a phenomenal run in terms of rainfall and pasture growth.

With the extremely wet start to 2022, even if we get median rainfall for the remainder of the year (an extra 327mm from June to Dec) Glnb will be sitting around 850mm which is 90th percentile territory.

The back-to-back wet years has proven particularly challenging in both managing pastures and livestock.

	2020	2021	2022
Pasture Quality			Mgmt
CATTLE			
○ Bloat			
○ Grass Tetany			
○ Worms & fluke			
○ Feet			
SHEEP			
○ Prolapse/dystocia			
○ Feet			
○ Worms & fluke			
○ Flies			

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This slide shows some of the major challenges we've seen across the South East region in the last 2.5 years.

The animal health issues are stacking up and compounding due to the ongoing wet conditions. Unfortunately a lot of these issues will remain a significant challenge into the foreseeable future.

Current soil moisture levels

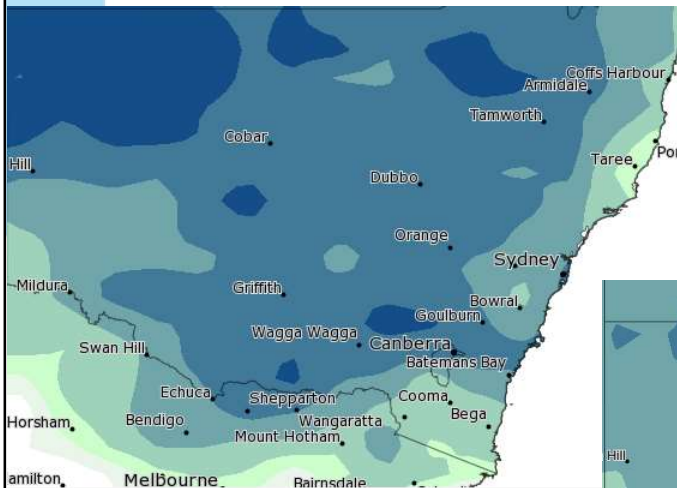
farmingsforecaster.com.au (14 June 2022)

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Not surprisingly, Farming Forecaster showing very wet conditions throughout the region.

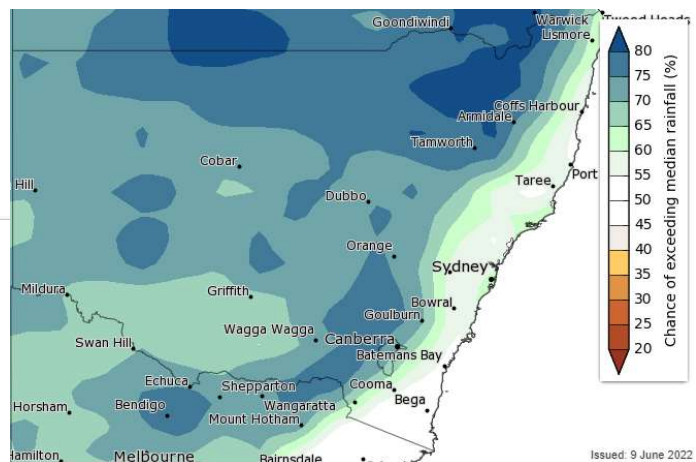
Chance of exceeding median rainfall

July



BOM: Issued 9 June 2022

August



This is the latest outlook from the Bureau (updated every Thursday).

The ideal winter forecast would have been below average rainfall.

Winter this year is going to be a very challenging period.

Putting a strategy together

1) What paddocks can you use?

- **Access?** Can you get out to stock (hay, silage, mineral supplements etc) & bring them in if required (assist with calving, treat feet issues etc).
- **Drainage (feet!), shelter, worms**



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1) What Paddocks can you use?

One of the key things at present is identifying what paddocks you can actually use both now and through the winter/early spring period. In thinking through your options it's really important to consider **access**. Need to be able to get supplements out to stock if and when required. Last year there were cases of cows going down with Grass Tetany and producers couldn't get supplements out. This type of situation is obviously something you really want to avoid. You also need to be able to get stock in if they need assist with calving, treat feet issues etc.

Drainage – where possible, try and avoid boggy paddocks to minimise feet issues. In terms of feet, twin bearing ewes are the highest risk category, so they are the highest priority. Need to try and target a well drained/ sloping paddock with no more than 1200kg DM/ha at the start of lambing as they are most prone to developing foot abscess.

Worms: Long acting drenches will be an extremely valuable tool this year. If you are using a long-acting drench, important to use a primer and an exit drench. Primer drenches clear the animal of any worms that are resistant to the long-acting treatment. A primer drench is an effective short-acting drench (preferably a combination) that does not include the same group as the long-acting product.

The exit drench kills larvae that have survived the persistent treatment and developed into breeding adult worms. An exit drench (like the primer drench) is an effective short-acting treatment (preferably a combination) that is from a different group/s to the persistent product.

Putting a strategy together

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- **Drainage (feet!), shelter, worms**

2) What does the pasture look like?

- **Is it able to meet requirements?** Young stock, pregnant, lactating etc?
- Summer vs winter growing species – frost?



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2) What does the pasture look like in these paddocks?

Is it able to meet requirements? Young growing stock and lactating stock have high energy and protein requirements that need to be met to ensure they perform and to avoid major animal health issues. Dry and early to mid preg is at lowest requirement.

A lot of producers have commented that stock aren't performing as well as expected. This is largely a pasture quality issue.

We have seen a lot of deaths in Merino weaners over the last fortnight due to malnutrition and internal parasites. Need to feed them!

Also need to be aware of what's in the paddock in terms of summer and winter growing pasture species. Even though you might have a lot of feed in paddocks, if a lot of that material is summer growing species it will burn off once we start getting some frosts. This will shift that material into the dead pool and quality will quickly fall.

Putting a strategy together

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2) What does the pasture look like?

- **Is it able to meet requirements?** Young stock, pregnant, lactating etc?
- Summer vs winter growing species - frost?



3) How much time do you have?

- Preparation vs supplementation
- Growing out/ turning off young stock

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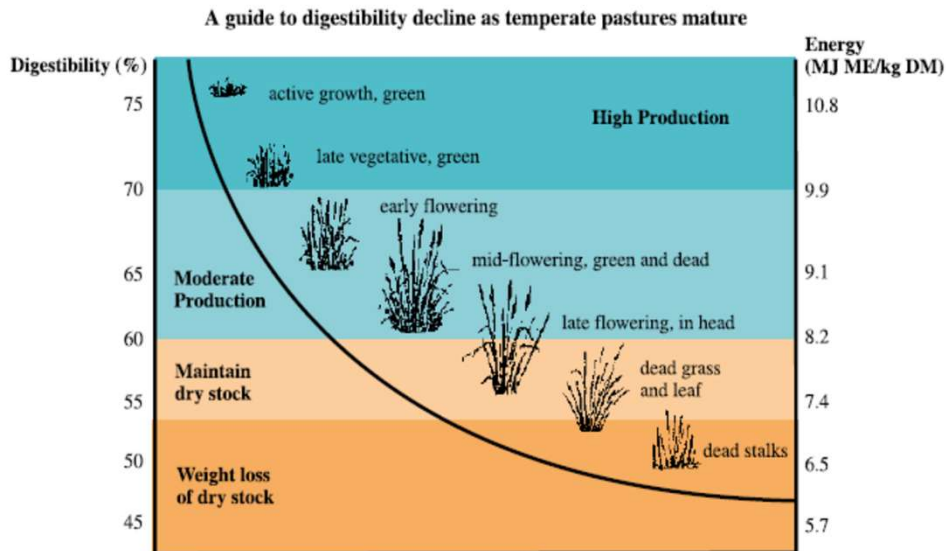
3) How much time do you have?

If you are lambing or calving in late winter or early spring, you still have a bit of time in terms of preparing paddocks. However, if you are lambing or calving now (or very soon) then are you have to deal with what's in front of you in terms of feed quality.

If you don't have much time to prepare paddocks and pasture quality is a concern, supplement stock with high energy/ high protein concentrates (grain, lupins, pellets, protein meals etc). Again, access to paddocks is going to be important.

Winter time could be an important catch-up period in terms of getting young stock up to joining weights or trying to turn off stock by a certain date.

Matching pastures to livestock requirements



Source: Prograze, 9th edn

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Most pastures at the moment have a mix of new, green growth (high digestibility) and old, dead low quality feed.

It's the green component that's driving livestock performance and what the stock are chasing. The question is, can stock readily access the green, or do they need to take some dead with it?

If half of each mouthful is green feed at 70% digestibility and the other half is poor quality feed at 40% digestibility, then the overall bite average could be sitting around 55% digestibility. Once we hit 55% digestibility or lower even dry stock will lose weight, regardless of how much feed is in front of them. So when assessing pastures, it's really important to have a close look to see what the stock are grazing. i.e. are they grazing a high proportion of green feed, or getting a mix of green and dead?

Matching pastures to livestock requirements

Cattle

Cattle Class	Pasture digestibility (green)		
	75%	68%	60%
Dry cow	700	1100	2600
Pregnant cow (7–8 months/ not lactating)	900	1700	ns
Lactating cow + 2 mth old calf	1100	2200	ns
Growing stock, % of potential growth			
30 [0.45 kg/d]*	600	1100	2900
50 [0.76 kg/d]	800	1600	ns
70 [1.07 kg/d]	1200	2600	ns
90 [1.37 kg/d]	2200	ns	ns

Sheep

Sheep Class	Pasture digestibility (green)		
	75%	68%	60%
Dry sheep	400	600	1200
Pregnant ewes			
mid	500	700	1700
last month	700	1200	ns
Lactating ewes			
single	1000	1700	ns
twins	1500	ns	ns
Growing stock, % of potential growth			
30 [116 g/d]*	400	700	1700
50 [194 g/d]	600	1000	ns
70 [270 g/d]	800	1700	ns
90 [348 g/d]	1600	ns	ns

Source: Prograze, 9th edn

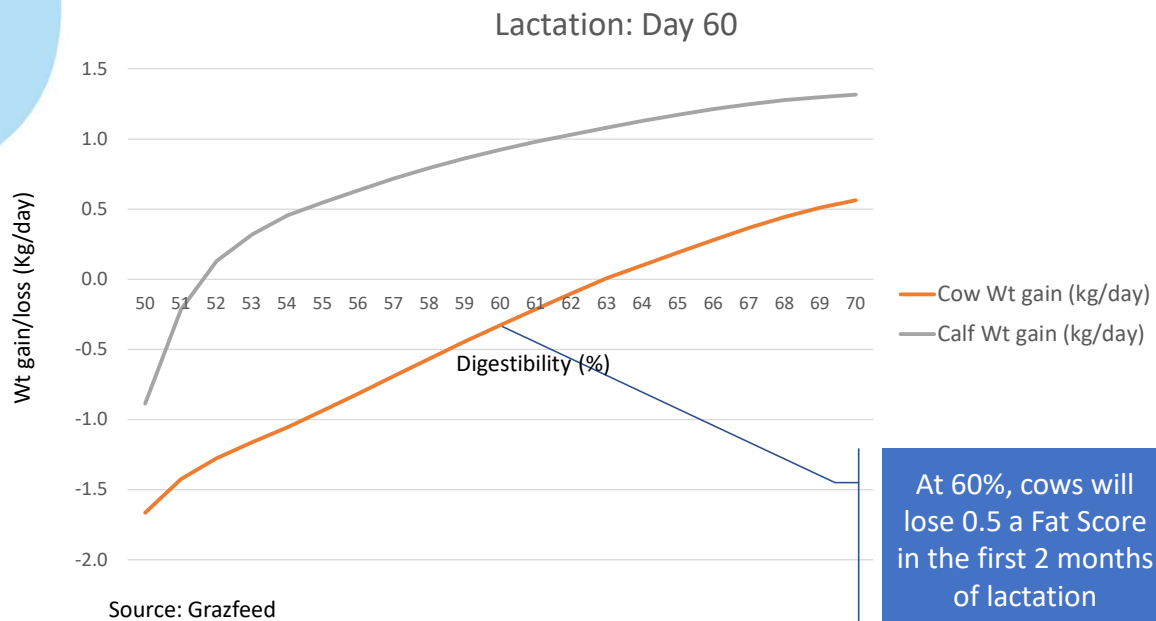
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Look at the top line for a dry cow or sheep. Key thing to note is dry stock can get away with lower quality feed as their nutrient requirements are lower.

However, once livestock reach late pregnancy and lactation, or if you are trying to grow out young stock, pasture quality is extremely important. **60% digestibility is no longer suitable for many classes of stock.**

If you have pastures that are long and rank, you can improve quality by slashing or grazing. If you are grazing you need to be careful of what class of stock you are using (worms and nutrition).

Impact of digestibility on cow/calf performance



This slide backs up the previous benchmark card. For lactating cows, once digestibility falls below 60% calf growth rate falls below 1kg/day due to lower milk production and cows are on a steep sliding scale in terms of weight loss. At 60% digestibility cows will lose around ½ a fat score in the first 2 months of lactation. At 55% digestibility they have almost lost a full fat score.

So pasture quality is not only important for driving lactation and growth rate in the calf, but also for preventing excessive wt loss in the cow (important for re-joining and minimising metabolic issues such as grass tetany).

Impact of digestibility on cow/calf performance

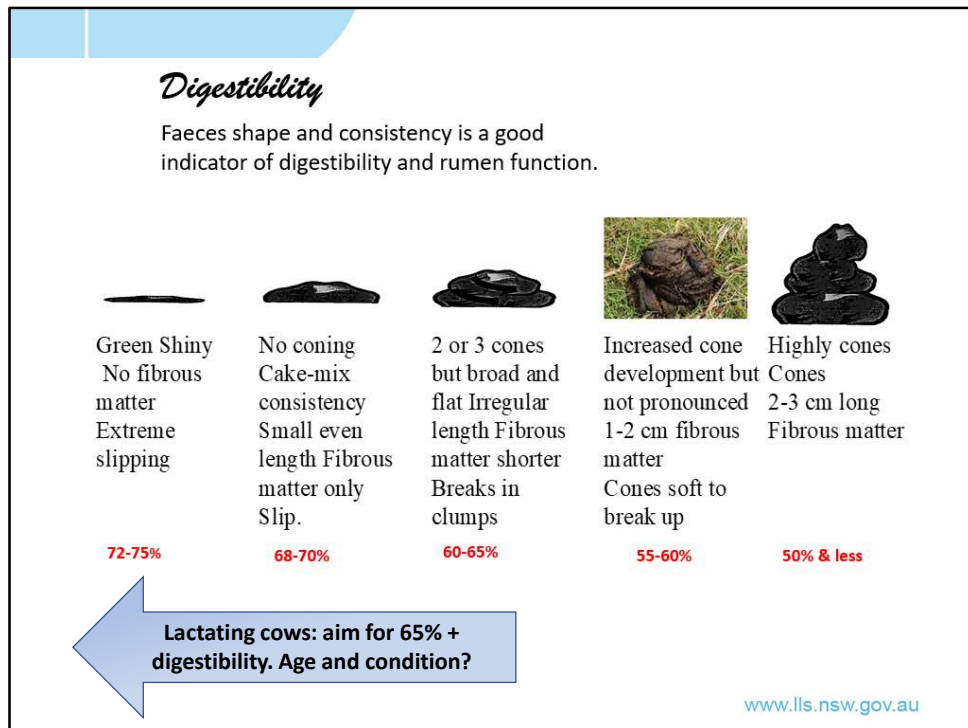
Day 60 of lactation

Pasture Digestibility (%)	Cow Wt gain (kg/day)	Calf Wt gain (kg/day)	Fat Score change in first 2 months of lactation
50	-1.67	-0.89	-1.41
55	-0.94	0.55	-0.89
60	-0.33	0.92	-0.49
65	0.19	1.17	-0.12
70	0.56	1.32	0.17

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Aim for 65% digestibility or better if the aim is to get > above 1kg/day growth rate in calves.

Getting as much growth as you can into calves from birth to weaning is really important – has a direct impact on value of young stock. It also takes the pressure off post-weaning growth rates.



Dung pats provide a good guide to overall digestibility of the diet that cattle are consuming. The higher the digestibility of the pasture, the 'flatter' the dung pat. As digestibility declines, more fibrous material passes out in the faeces which gives dung pats structure and allows them to form up.

For lactating cows and young stock, aim for the 3 dug pats on LHS. Allocate better quality pastures to first calvers as they are under the most pressure.

How much do you need?

Assuming pasture is 70 – 72% digestible...

- Lactating cows
- Young cattle growing at 0.7 to 0.8 kg/day

1600kg DM/ha
~ 6cm

Ewes
last month
of preg 800 – 900kg
DM/ha
~ 2.5cm



Lambing ewes
1400kg DM/ha
~ 5cm

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If we can use grazing or slashing to improve the overall quality of the feed and get it up to around the 70% digestibility mark, how much do you need?

For cows and calves or young cattle (high priority stock) you are looking at around 1500 – 1600kg DM/ha, which equates to around 6cm in height.

For lactating ewes, you are looking at around 4 – 5cm.



Paddock at Bannister. The old carry over dead feed not only reduces digestibility, but it also stops growth due to shading.

Slashing lets light back in and increases pasture quality as stock now have full access to the higher quality green feed. Feedback from the producer is sheep are hammering the slashed areas.

In this scenario you need to be mindful of stocking rate. For example, if 50% of the paddock is slashed and stock are grazing the slashed areas, your stocking rate has effectively doubled. This concentration of grazing also concentrates the worm issue.

Really important to be on top of worms this year as paddocks are loaded with infective larvae. **Worm test monthly.** If you only test every 2 months things can get out of control quickly.

Some final thoughts...

Cattle

- Aren't as selective, but better suited to lower quality feed
- If paddock preparation beats you, use supplements to increase energy and protein intake (access to paddock?)

Sheep

- Are better at sorting through and selecting higher quality feed BUT...
- Tall pasture = physical barrier, aggravates feet issues, 'patch' grazing etc
- If paddock preparation can't be achieved and feet are a major concern, consider native/ lower fertility paddocks with lower herb mass and supplement if required
- Watch out for weaners

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Grass Tetany

- “Low Mg disease”
- Most commonly seen in freshly lactating cows in late winter and autumn
- Fat, old cows grazing grass-dominated pastures are of greatest risk



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Last season proved to be a particularly bad year for grass tetany in the South East region with many producers reporting above average losses in their herds.

There have been reports of recent grass tetany deaths. Signs are indicating that we could be in for another bad grass tetany year.

What is it? Grass Tetany is a metabolic disease where Magnesium (Mg) levels in the blood fall below critical levels. Unfortunately Mg can't be stored in the body, so livestock need a daily supply in the diet. If demand exceeds supply, then blood Mg levels drop and if the drop falls below a critical level it can quickly lead to death.

Old cows in excessive condition grazing grass-dominated pastures are of greatest risk. i.e., cows > 6 years old and fat score 4 + are highest risk animals.

Grass Tetany

What can you do?

- Avoid 'risky' paddocks with a history of grass tetany, potassium-based fertiliser use etc.
- Prepare pastures to increase pasture quality and clover content = increased energy and Mg intake
- Be prepared with hay and Mg supplements
- Monitor closely at calving



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There are a range of things you can do to minimise grass tetany. The more things you can bring together as an integrated package the better.



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Photo from Rod Hoare at Binda.

In the wet conditions of 2016 Rod and Helena had problems accessing the back of the property, so they put down 3km of gravel on the central laneway for all weather access to all areas to the back of the property.



In addition to the laneway, they also laid gravel in gateways and extended the gravel area into the paddock to form a 20m x 20m feed pad. Cattle used to get bogged around hay bales and feed troughs. This has solved the issue.

They also commented that the gravel in the gateways has stopped the damage that occurs when cattle gather at the gateway waiting to be moved to the next paddock when accustomed to rotational grazing.

Farming Forecaster

Farming Forecaster

Region Selector

Select your region from the map or list to view data for the devices in the area.

New South Wales

Hunter

South East

Tasmania

Tasmania

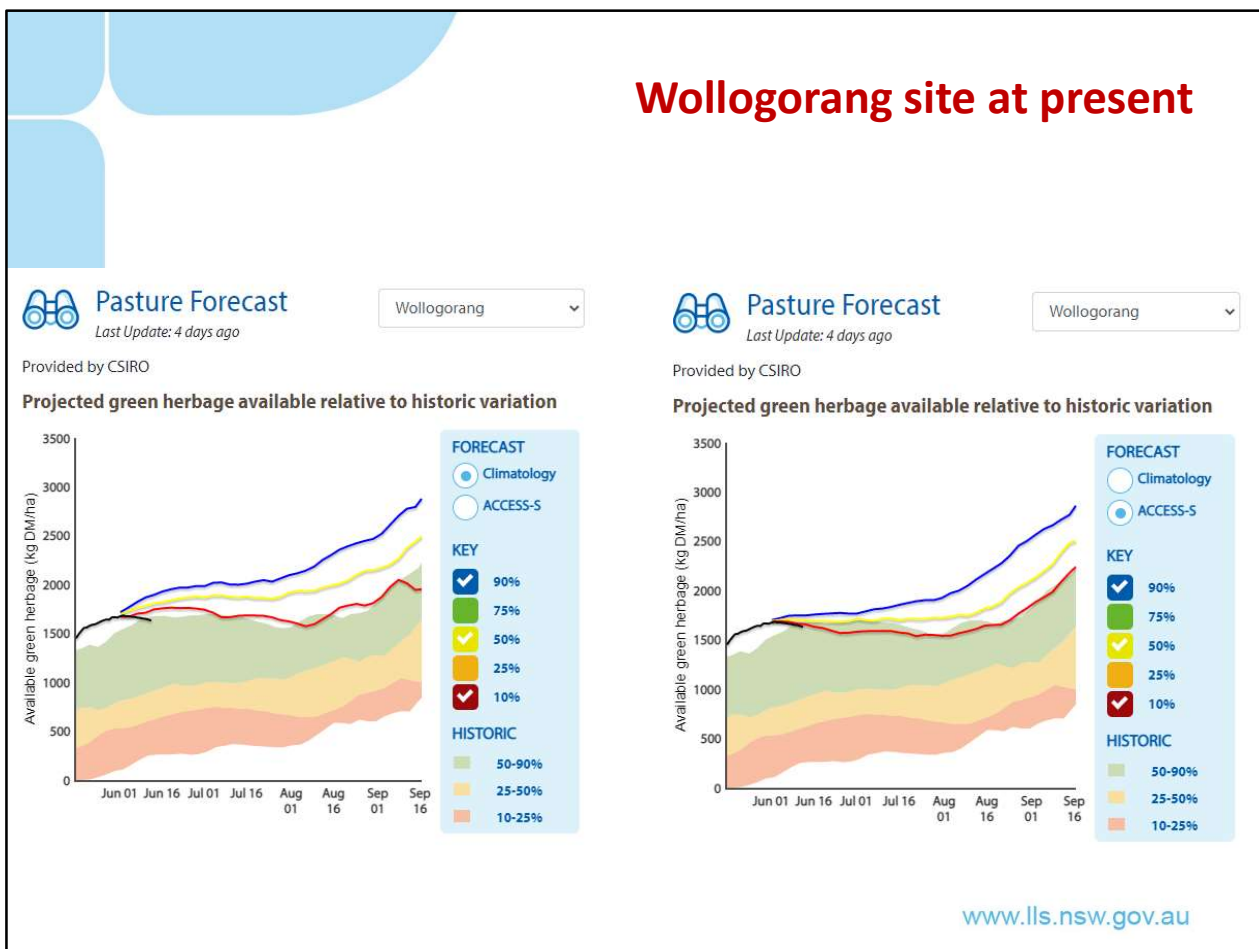


Farming Forecaster has been expanded into the Hunter LLS region (late 2021) and Tasmania (early 2022).

This year we should see Murray, Riverina and Central Tablelands LLS regions coming on board. WA also expected to join FF later this year.

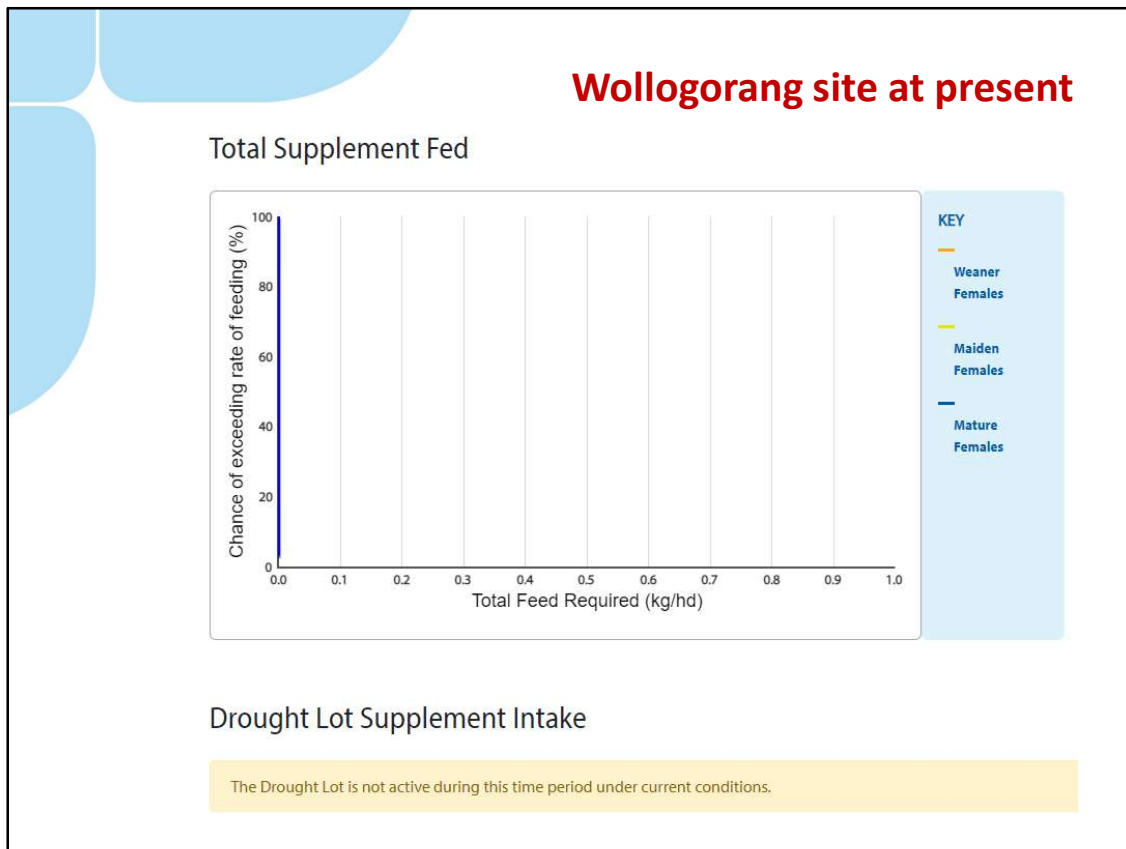
The funding received to develop Farming Forecaster has come to an end, so Farming Forecaster now needs to 'stand on it's own two feet'.

Wollogorang site at present



Up until now, the **pasture forecast** was based on historical data for the location selected – i.e. based on the last 30 years of weather. This is known as climatology.

We now have an ACCESS-S button that you can click on which enables users to view the forecast based on BOMs ACCESS-S2 rainfall forecast model for the next 3 months. So now you have access to 2 pasture forecasts – one based on historical data and one based on forecast data.



Droughtlot function. Funding from NSW DPI has enabled some updates to be done in GrassGro re droughtlots. GrassGro has never had a destocking policy, so previously when drought conditions hit the program would feed stock in the paddock to keep them above a specified condition score.

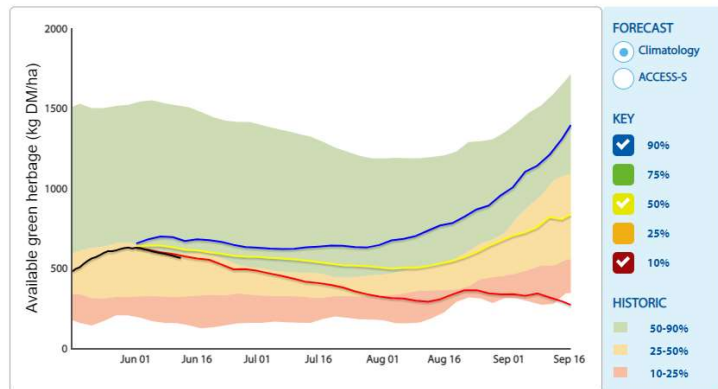
The new work means that we can now set thresholds, so when minimum ground cover thresholds are breached, stock are removed off pastures and fed in a droughtlot. Stock are released from the droughtlot once herbage mass hits a target level (e.g. 600kg DM/ha). This means the GrassGro is now replicating what a lot of graziers are doing during drought (i.e. getting stock off paddocks and into containment areas).

This screen shot is an example for the current Wollogorang site. Given current conditions Ground Cover is not an issue, so the droughtlot has not been activated, hence the statement in the yellow box.

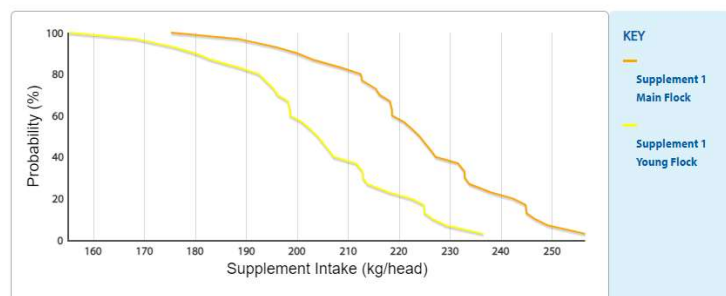
An example of when Ground Cover is breached and the drought lot is triggered

Projected green herbage available relative to historic variation

Warning: The Drought Lot is active at some point during this time period.



Drought Lot Supplement Intake



The Pasture Forecast is a 'real time' fodder budget



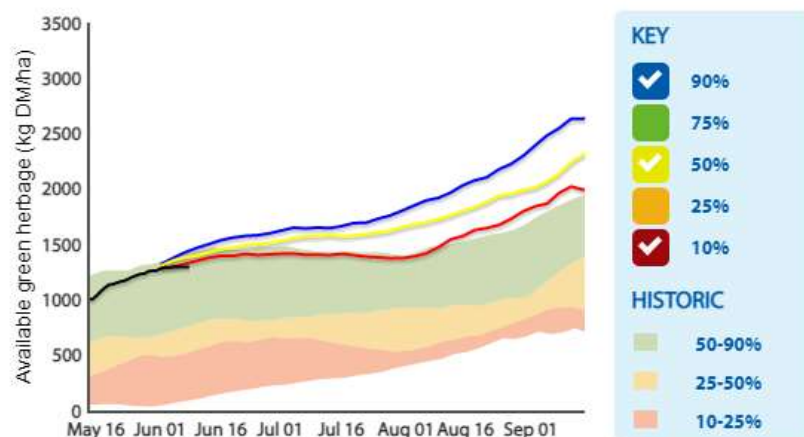
Pasture Forecast

Last Update: 6 days ago

Gunning

Provided by CSIRO

Projected green herbage available relative to historic variation



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We've been getting questions from producers about obtaining pasture growth rates from Farming Forecaster so they can do a fodder budgeting.

It's important to note that Farming Forecaster is giving you a real-time fodder budget.

Fodder budgeting

Key components of a fodder budget

Component	Source
1) Current herbage mass (kg DM/ha)	○ Paddock assessment
2) Pasture growth (kg DM/ha/day)	○ Pasture growth tables (Prograze) ○ Local data
3) Livestock intake (kg DM/ha/day)	○ Grazfeed ○ Livestock intake tables (Prograze)



Photo: C Houghton

Table shows the key components of a fodder budget.

All of these things are being taken into account and calculated by GrassGro in the background – the end result is the pasture forecast.

If you are going to sit down and manually do a fodder budget, one of the difficult parts is coming up with an estimated pasture growth rate for the next 2-3 months ahead.

Pasture growth rates – Southern Tablelands

Estimated pasture growth rate (mid month) of specific pasture types (kg DM/ha/day)

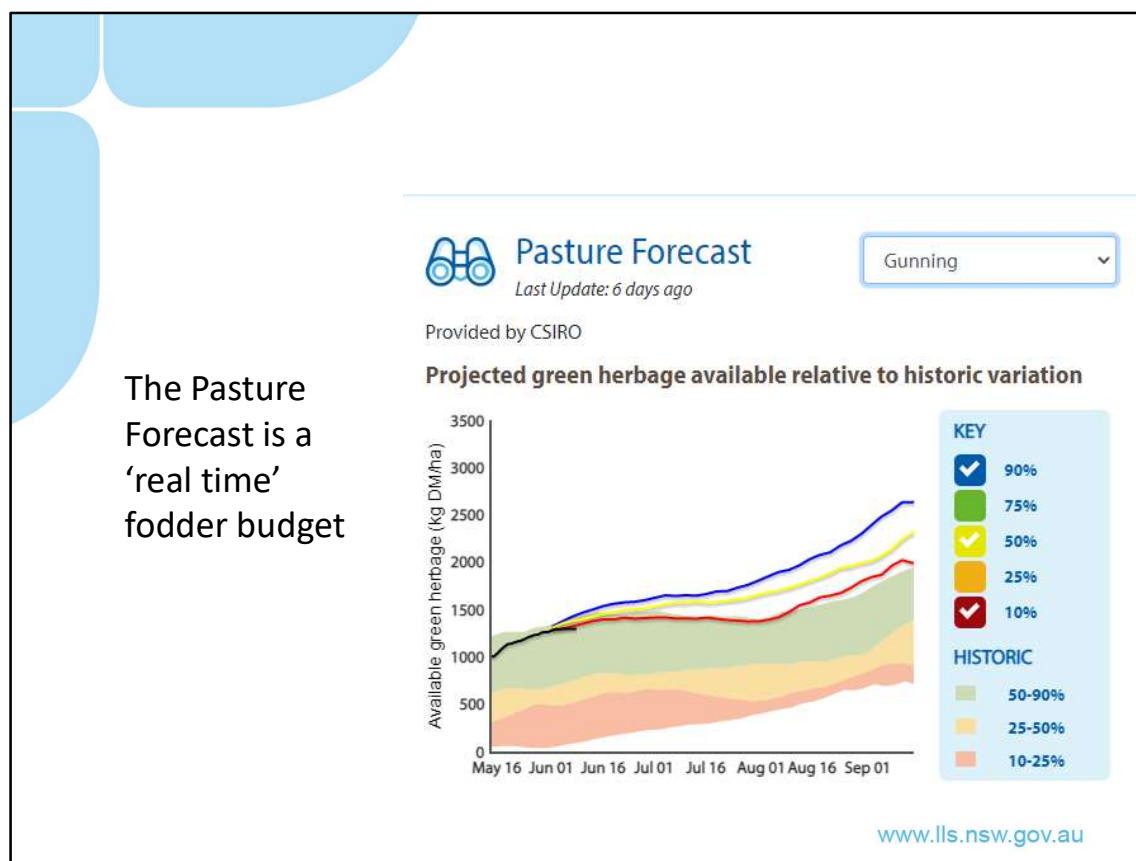
	J	F	M	A	M	J	J	A	S	O	N	D
Perennial and annual grass plus clover – fertiliser 1 in 2–3 years	7	5	7	15	13	8	7	12	32	60	20	10
Microlaena, Austrodanthonia plus clover – fertiliser 1 in 2–3 years	16	14	10	8	10	7	7	12	15	30	30	18
Red grass, Kangaroo grass – unfertilised	10	6	3	3	2	1	1	1	7	15	21	20
Introduced perennial grass and clover – annual fertiliser	10	10	15	26	20	12	10	15	45	75	55	20
Oats	0	0	12	25	31	22	16	25	50	70	48	0

Source: Prograze, 9th edn.

NOTE: the figures in the table are median values. Wide variation occurs (60% below to 100% above) depending on conditions

This table is from the Prograze manual and provides a guide to average monthly growth rates for various pasture types throughout the year. Note that these numbers are just averages and can vary a lot due to seasonal conditions at the time.

June Pasture growth rates this year are very low due to cold, overcast weather and waterlogging on many paddocks.



If we go back to the pasture forecast on Farming Forecaster, if we use the median values from the previous table it would be like using the 50% line (yellow line).

The red line (10th percentile) would be akin to doing a fodder budget if we used very negative growth rate figures. The blue line (90th percentile) would be doing a fodder budget expecting very strong pasture growth in the coming months.

The benefit of Farming Forecaster is the program essentially does 5 x fodder budgets using different predicted growth rates (10, 25, 50, 75 and 90% iles) AND we also have a black tracking line to show progress through the month.

If we look at Gunning example, it's showing that the quantity of pasture is well above average for this time of year and the fodder budget is looking very healthy, regardless of what happens to rainfall in the coming months. The big issue is pasture quality, not quantity.

Property specific fodder budgets are particularly valuable when feed is tight



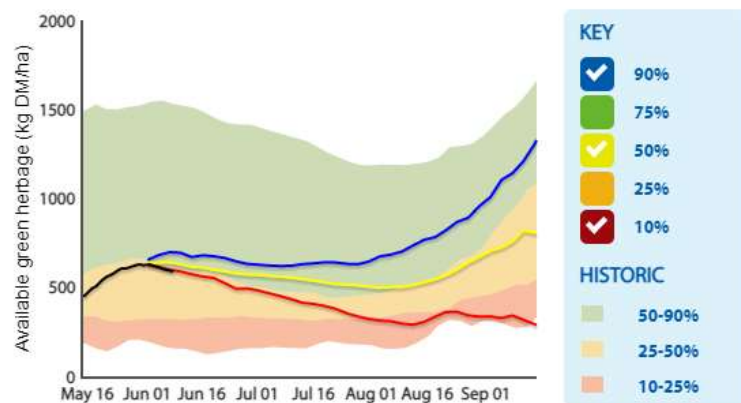
Pasture Forecast

Last Update: 6 days ago

Ratharney

Provided by CSIRO

Projected green herbage available relative to historic variation



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By way of contrast, here is a pasture outlook for one of the Tassie sites. This fodder budget is very different from Gunning and is showing a much tighter winter outlook, with available green herbage likely to be sitting around 500 – 600kg.

It is the tight times like this where sitting down and doing your own property specific fodder budget becomes extremely valuable. At present we are at the other end of the scale and dealing with a pasture quality issue.

Thank you



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