



Nutrition and the Milk Docket

Laura Pattie

BVSc Dist, MANCVS – Nutrition (Ruminant)



Milk Protein percentage

Primarily energy balance –

- ↑ the intake of NSC, increases milk and milk protein yield and N efficiency in lactating cows
- ↑ energy, ↓ protein catabolism as an energy source = more N for MP
 - Because AA's used as gut energy source
- Protein deficiency
- Mastitis, other diseases
- Poor rumen function – flow on to reduced bug popn, reduced energy supply, reduced microbial protein



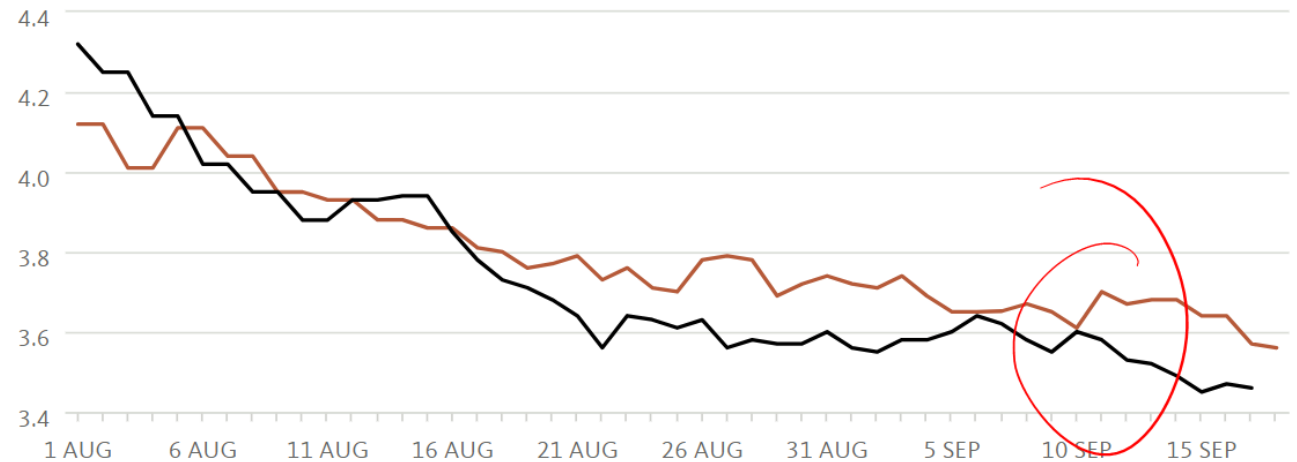
Milk Fat Percentage

- Fibre – Acetate
- Non structural carbohydrates
- Mobilisation of body fat
- Ketosis
- Feeds and supplementary fats
- Heat stress

Recent rain in the BOP (9th/10th/11th sept)

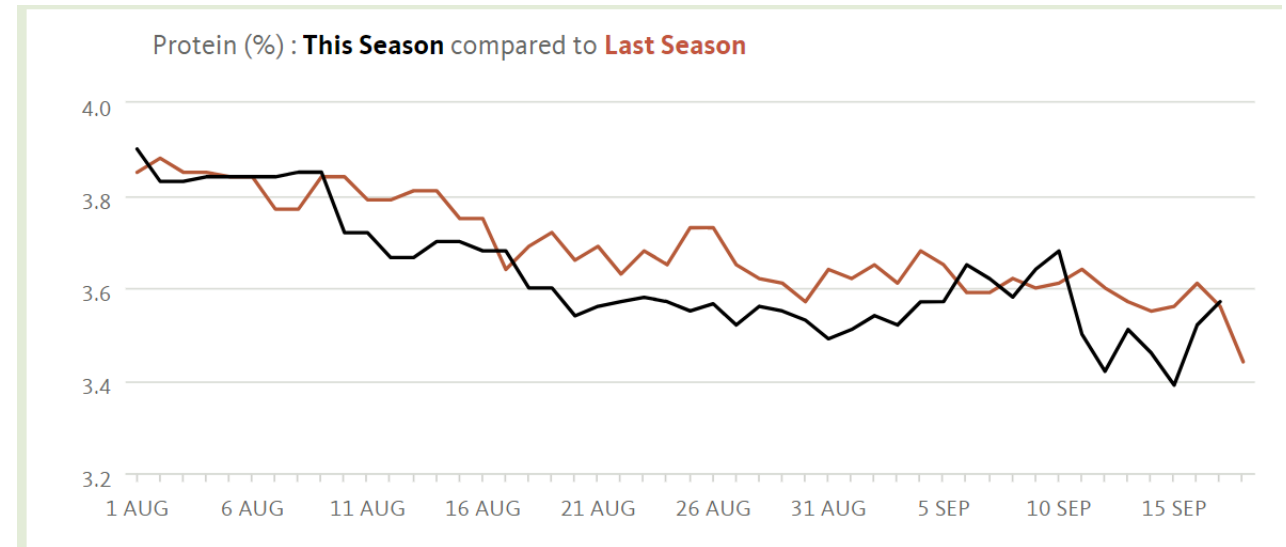
- Low lying farm
- Previous August wet – feeding out silage. Farmers comment – not the best silage. Energy density of the diet likely reduced.
- Second lot of rain (110mm) further feed deficit

Protein (%) : **This Season** compared to **Last Season**



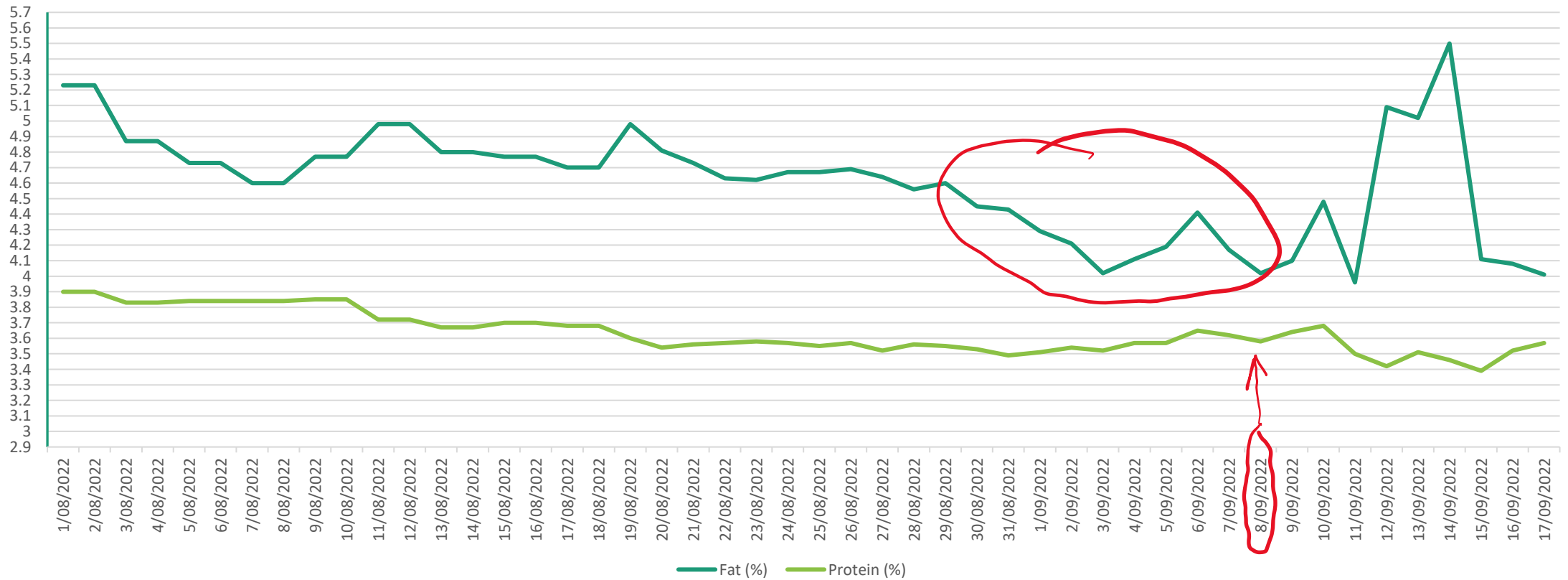
BOP farm – low lying

- Struggling with pasture quantity
- Feed pad - 10.5kgDM/cow/day
- Introduced bypass fats early sept
- Rains 9th-10th-11th sept – OAD for three days and cows diet predominantly grass baleage and concentrates on feed pad.

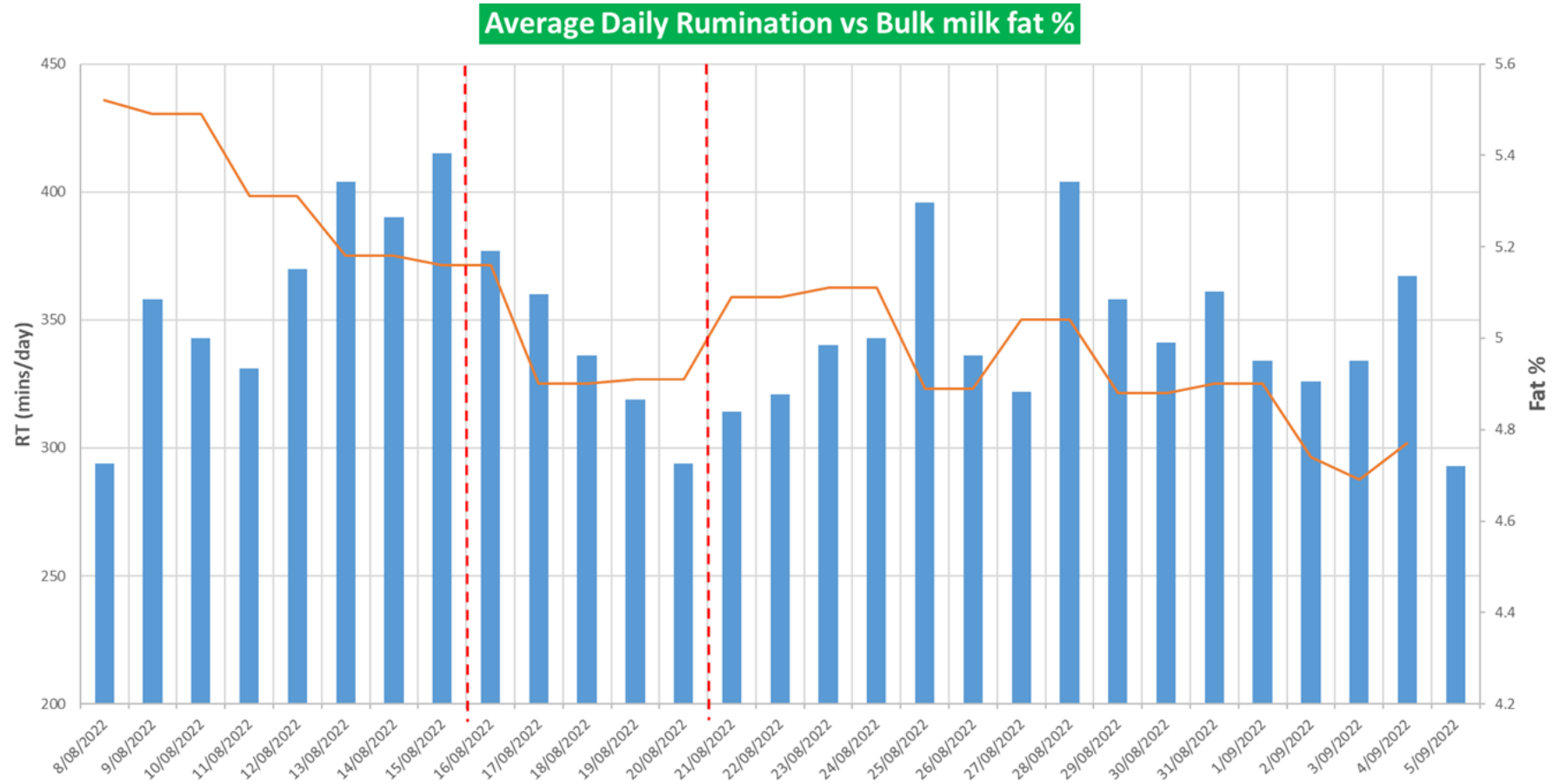


BOP farm – low lying cont...

Milk Protein and Fat Percentage



Milk Fat percentage



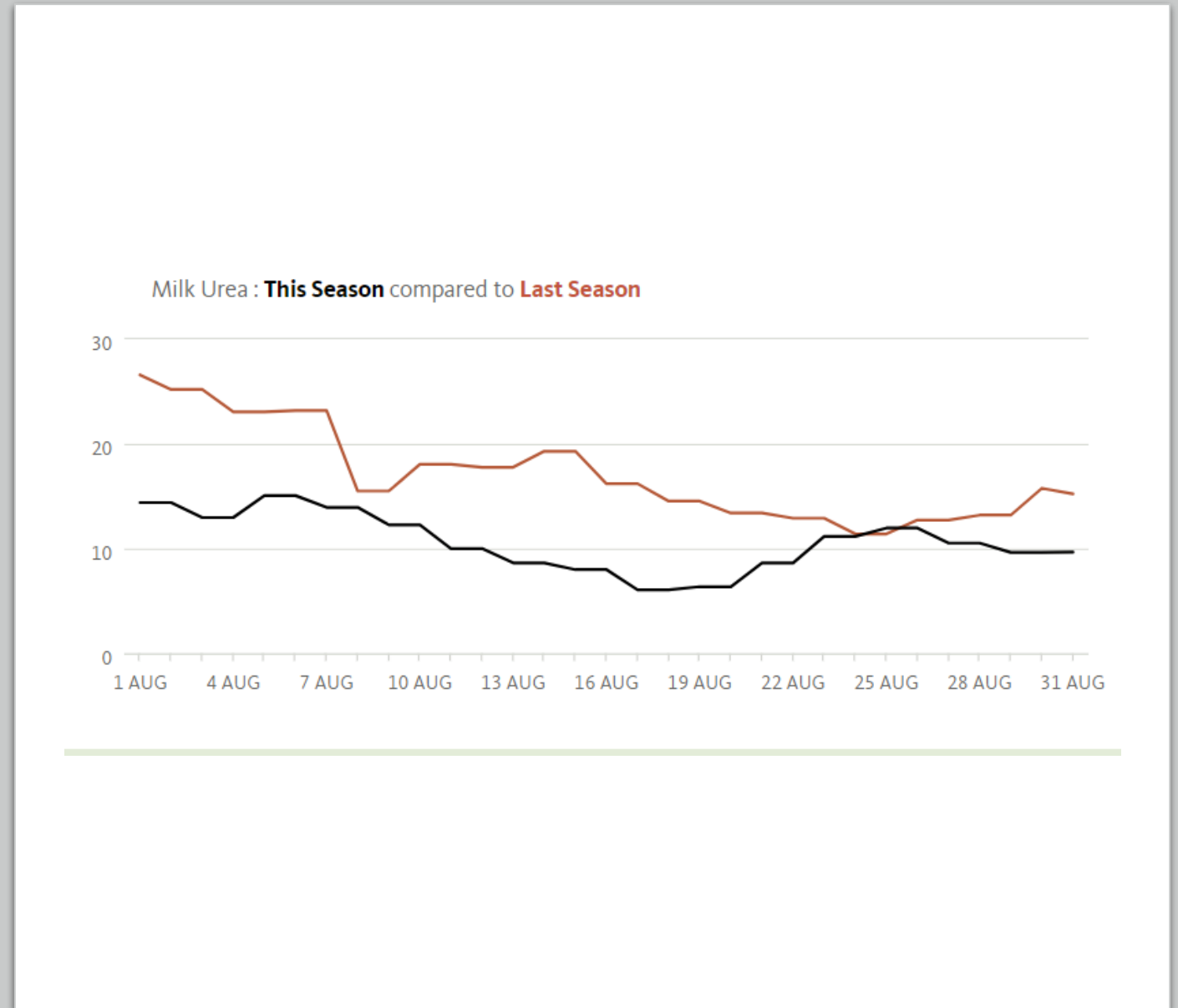


Milk ureas

- Relevancy?
- Lower crude protein pasture/N caps
- Rumen efficiency vs protein deficit?
- Are the numbers thrown around relevant?
- SARA?

Milk urea

- Pasture samples taken
- Analysis of the diet with DietCheck software
- Use as an indicator to look closer
- How low is too low?



North Canterbury Farm

17th June 2022

22nd August 2022

Plant Analysis Results							
Sample Name:		Silage	1.11	3.3	2.4	M9	2.6
Lab Number:		3015539.1	3015539.2	3015539.3	3015539.4	3015539.5	3015539.6
Sample Type:		Mixed Pasture, Haylage/Baleage	Mixed Pasture	Mixed Pasture	Mixed Pasture	Mixed Pasture	Mixed Pasture
Crude Protein*	%DM	13.3	24.2	29.2	22.9	24.4	23.0
Acid Detergent Fibre (seq)*	%DM	26.3	19.2	18.1	20.5	19.3	20.0
Neutral Detergent Fibre*	%DM	43.4	35.7	35.4	35.3	34.3	35.2
Lignin*	%DM	5.1	6.7	8.0	7.1	7.3	7.4
Ash*	%DM	10.5	10.2	11.8	10.5	10.3	11.0
Organic Matter*	%DM	89.5	89.8	88.2	89.5	89.7	89.0
Soluble Sugars*	%DM	6.2	13.6	13.9	13.0	24.6 #1	19.4 #1
Starch*	%DM	0.6	< 0.5	1.7	< 0.5	< 0.5	0.9
Crude Fat*	%DM	3.8	4.1	4.6	3.9	4.3	4.4
Digestibility of Organic Matter in Dry Matter (DOMD)*	%	70.9	79.2	80.7	76.4	81.4	80.8
Metabolisable Energy*	MJ/kgDM	11.3	12.7	12.9	12.2	13.0	12.9

Plant Analysis Results			
Sample Name:		2.2	3.2
Lab Number:		3057409.1	3057409.2
Sample Type:		Mixed Pasture	Mixed Pasture
Sample Type Code:		P1	P1
Crude Protein*	%DM	19.8	16.3
Acid Detergent Fibre (seq)*	%DM	20.3	19.4
Neutral Detergent Fibre*	%DM	37.2	34.2
Lignin*	%DM	5.2	3.9
Ash*	%DM	9.4	8.9
Organic Matter*	%DM	90.6	91.1
Soluble Sugars*	%DM	21.2 #1	20.4
Starch*	%DM	< 0.5	< 0.5
Crude Fat*	%DM	3.7	3.5
Digestibility of Organic Matter in Dry Matter (DOMD)*	%	77.0	79.2
Metabolisable Energy*	MJ/kgDM	12.3	12.7
Non Structural Carbohydrate*	%DM	29.8	37.1

Diet name:

Milkers
25.8.22

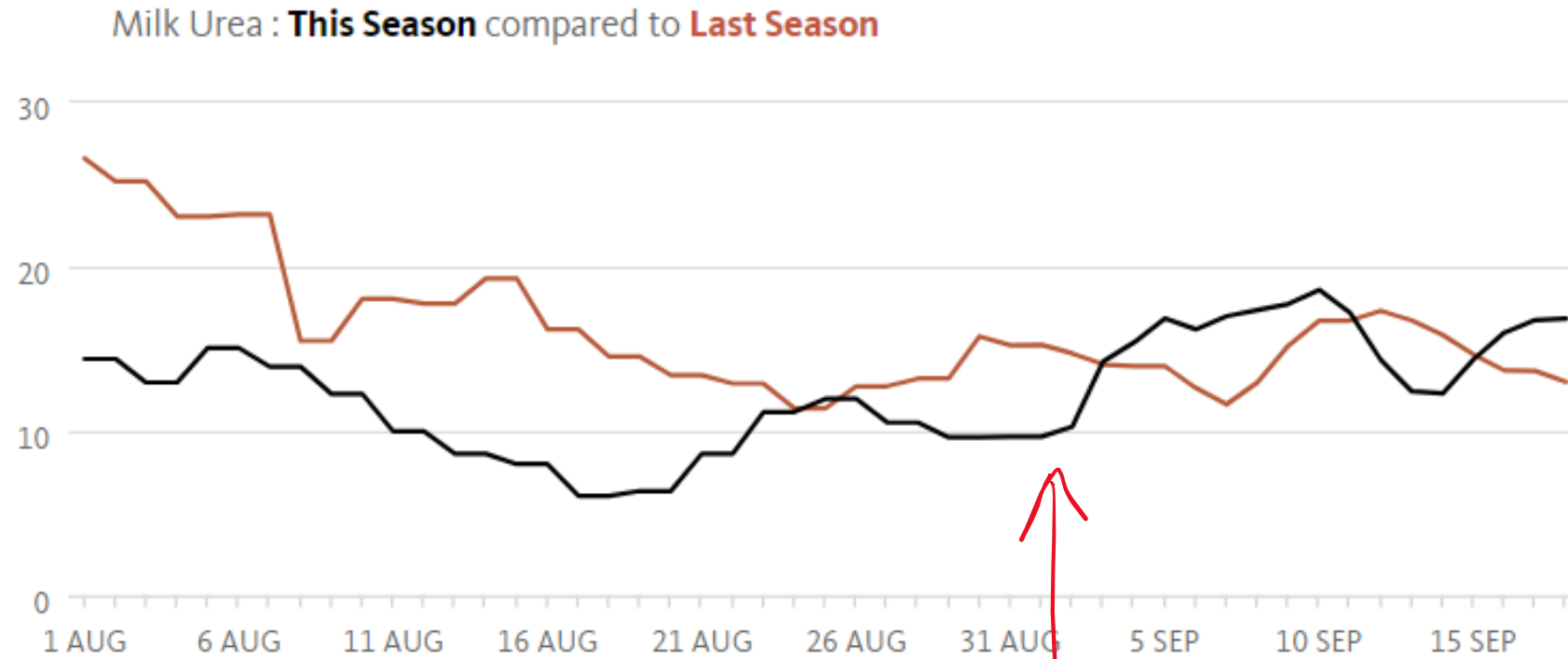
Milkers
25.8.22 OG
BLEND

Feeding plan (kg DM/head/d)

Maize silage larundel Nth Eyre Rd may	1.500	1.500
Maize Silage Larundel West Stack may	1.200	1.200
2.2	11.000	11.000
Fodder..Sugar Beet bulbs (NZ)	1.000	1.000
Barley	0.516	0.516
Molasses (Cane)	0.375	0.375
Soyabean Hulls	0.270	0.630
Tapioca GrainCorp	-	0.270
Dist. Grains Maize	0.623	0.445
Soya 48	0.900	0.450

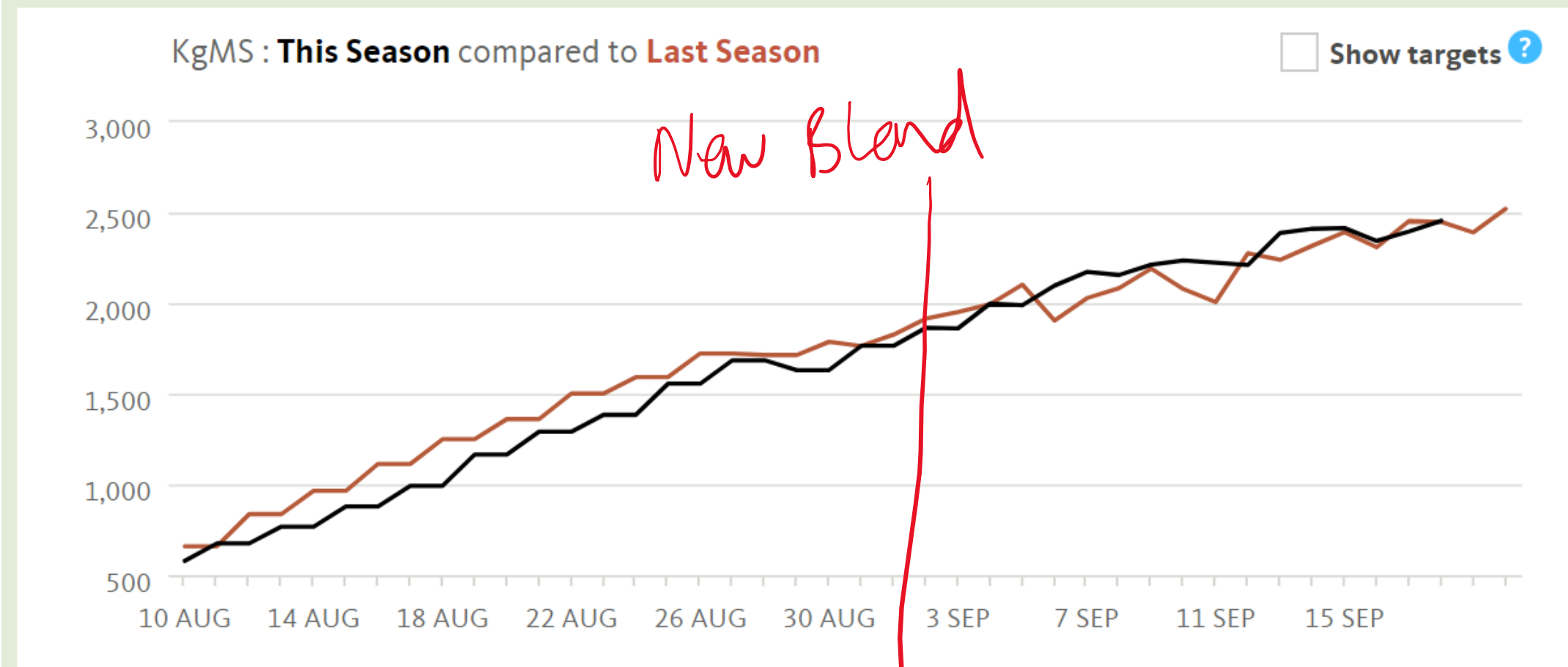
Diet name:	Milkers 25.8.22	Milkers 25.8.22 OG BLEND
NDF (%DM)	33.3	34.2
NDF from Forage (%DM)	29.4	29.4
Nutrients (units as stated)		
DM intake (kg/d)	17.7	17.7
ME (M/D)	12.1	12.1
ME (% req)	120	119
Milk from ME (kg)	25.0	24.9
<u>Protein (%DM)</u>	<u>18.3</u>	<u>17.0</u>
MP -N (g/d)	2240 ↑	2065
MP -E (g/d)	1988 ↑	1915
MP (limiting) (% req)	118	114
Milk from MP (kg)	24.5 ↑	23.4
Starch (%DM)	7.3	8.0
Sugar (%DM)	19.8	19.6
Starch plus Sugar (%DM)	27.1	27.7

Milk urea

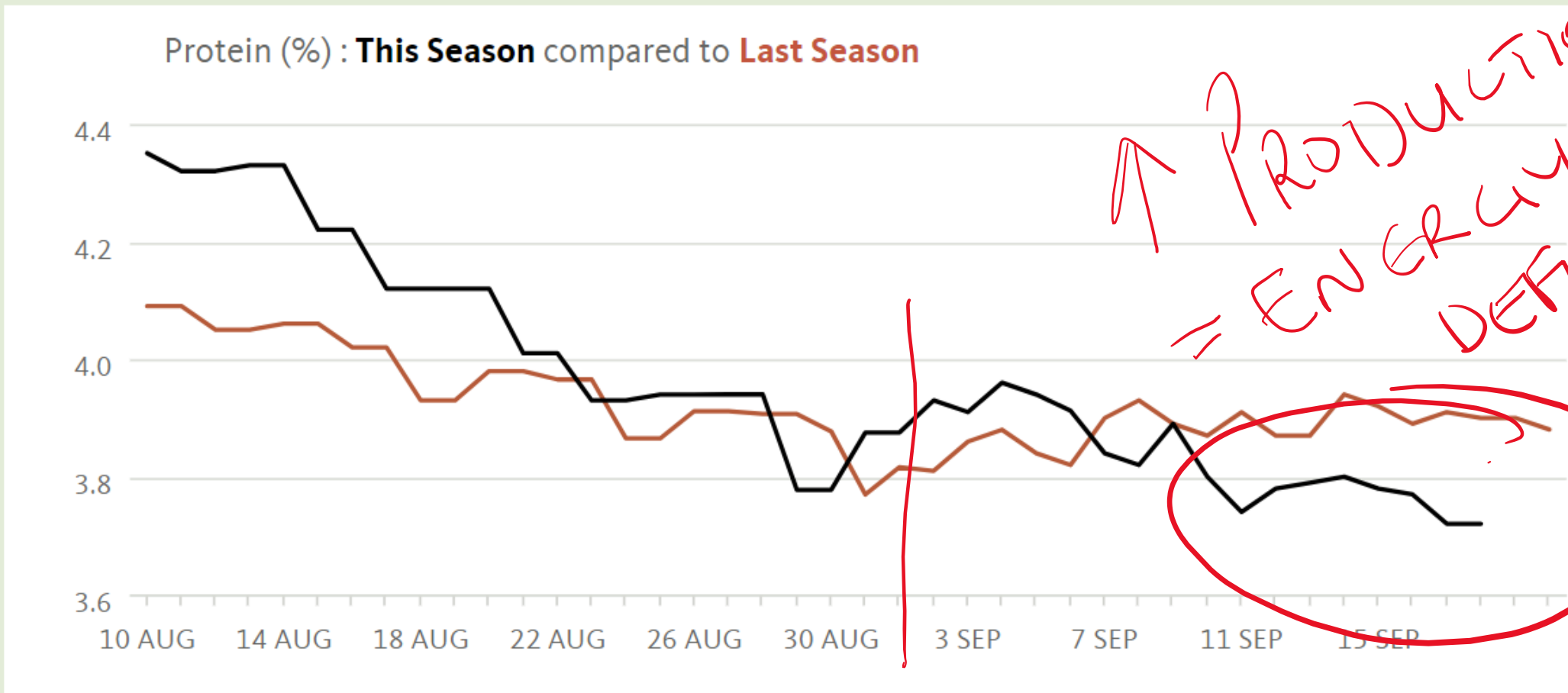


New Blend

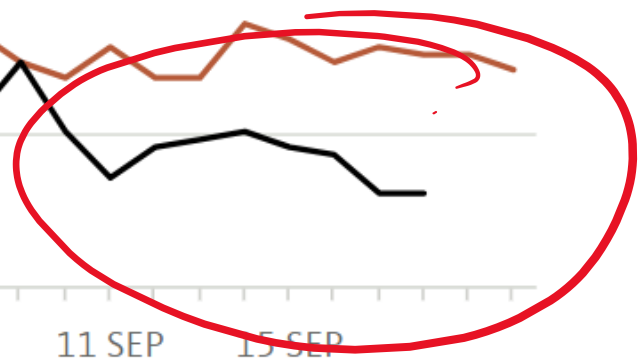
Milk production changes



Next challenge...



↑ PRODUCTION
= ENERGY DEFICIT





Share...

- What are your trigger points for looking further into the situation?
- What do you commonly see at this time of the year?
- Words of wisdom
- Questions to ask the farmer
- Things to look out for