

New Insights to the Feeding Value of Grazed Pasture

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Programme background

- Collaboration with Cornell University, USA
 - Prof. Mike Van Amburgh - August 2015
- Goals:
 - To better define grazed pasture
 - Strategies to complement pasture
 - Increase performance from pasture
- Prerequisite – additional to weekly pasture cover measurement and budgeting - PBI

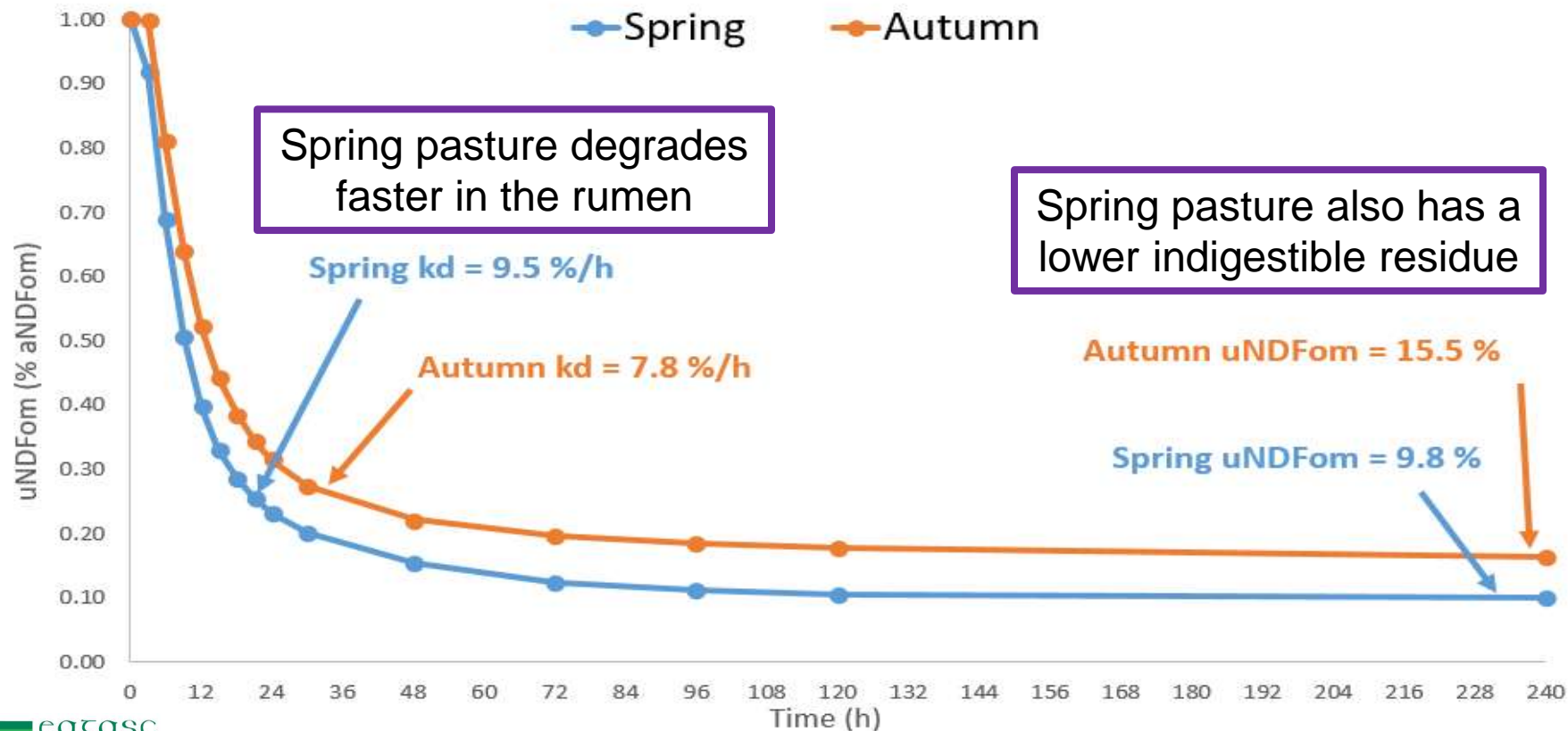


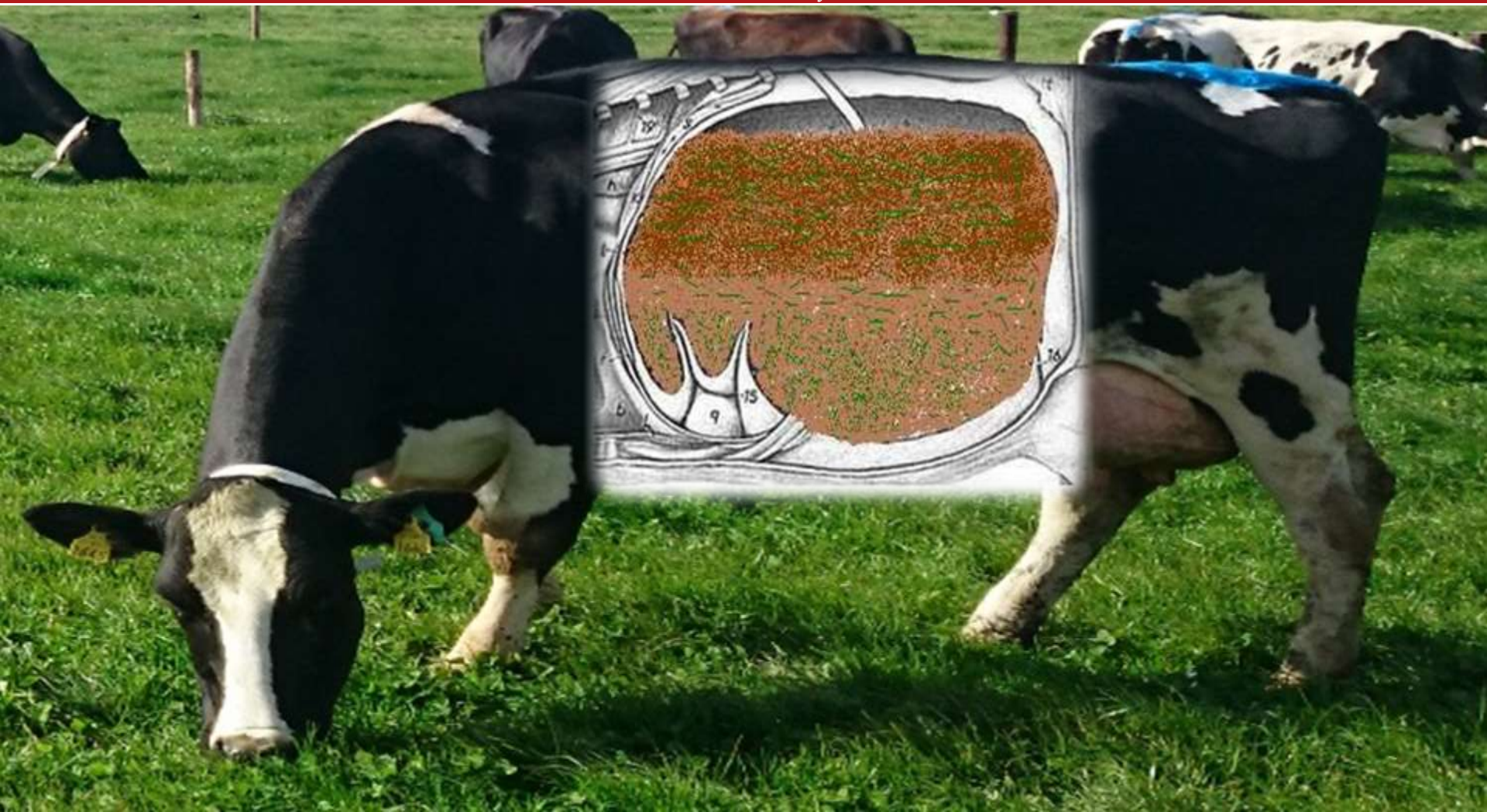
<u>Irish Standard Analysis</u>		<u>CNCPS Analysis</u>	
CP	DMD	PA1	Ammonia
		PA2	Soluble True Protein
		PA3	Insoluble True Protein
		PA4	Fiber Bound Protein
		PA5	Indigestible Protein
		CA1	Volatile Fatty Acids
		CA2	Lactic acid
		CA3	Other Organic Acids
Sugar		CA4	Sugar
Starch		CB1	Starch
		CB2	Soluble Fiber
NDF		CB3	Digestible NDF
			Fast pool dNDF
ADF			Slow pool dNDF
Lignin		CC	Indigestible NDF
Fat	Fat		
Ash	Ash		

Nutrient requirements

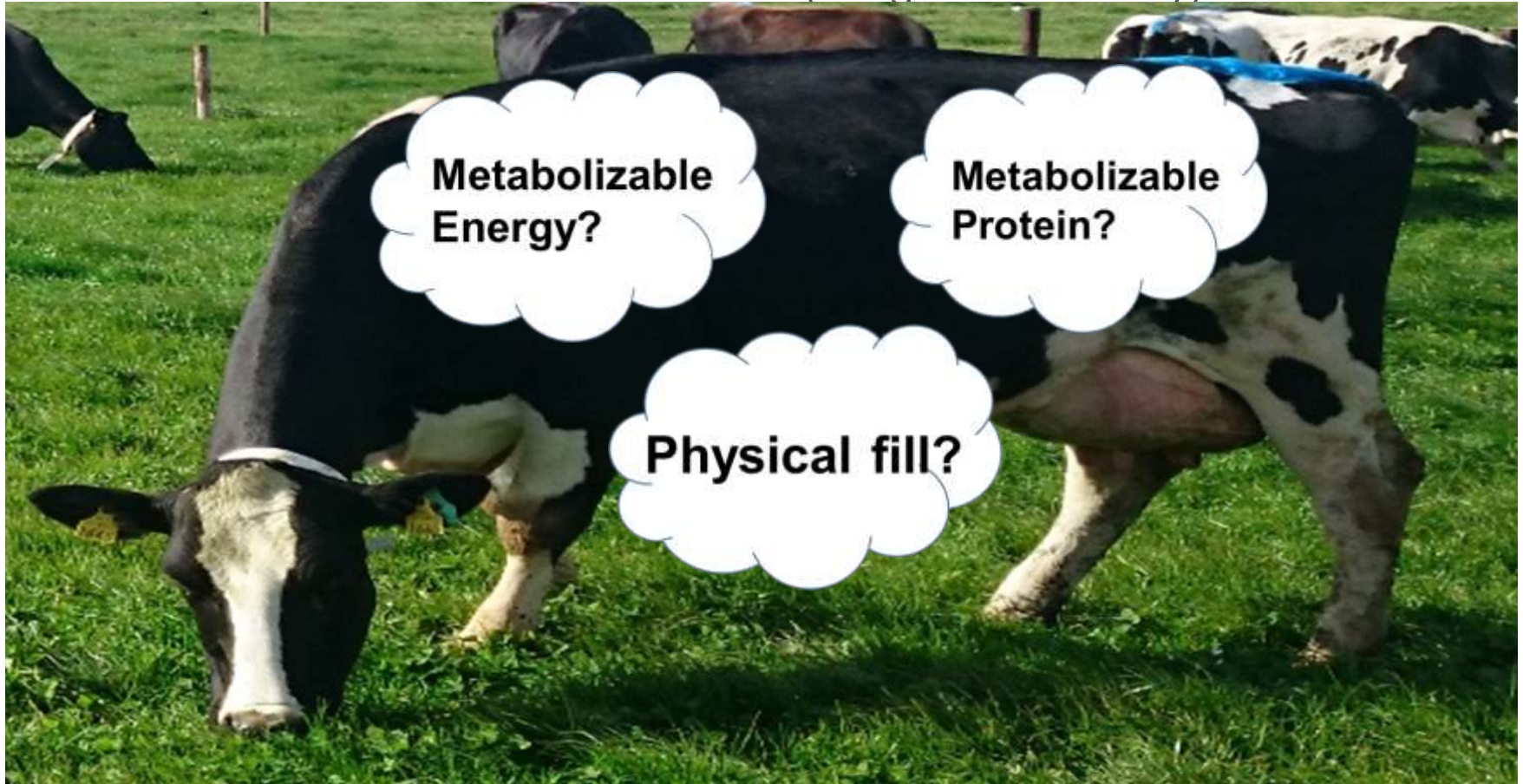
- Maintenance
- Lactation
- Pregnancy
- Growth
- First limiting
 - Metabolizable Energy (ME)
 - Metabolizable Protein (MP)

NDF degradation of Irish spring v autumn pasture





Paddock experiment 2018 (Teagasc Clonakilty)



**Metabolizable
Energy?**

**Metabolizable
Protein?**

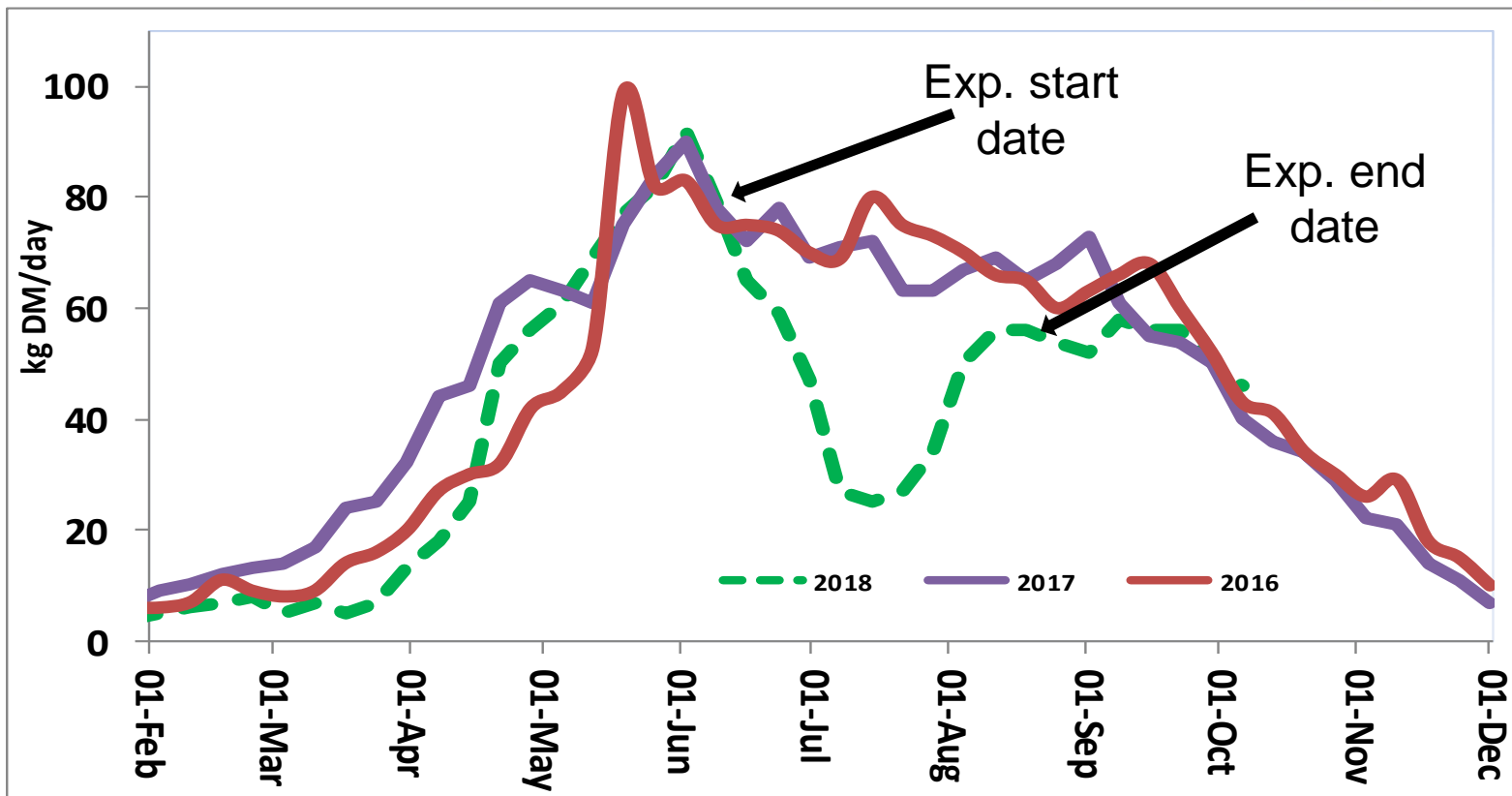
Physical fill?

Paddock experiment

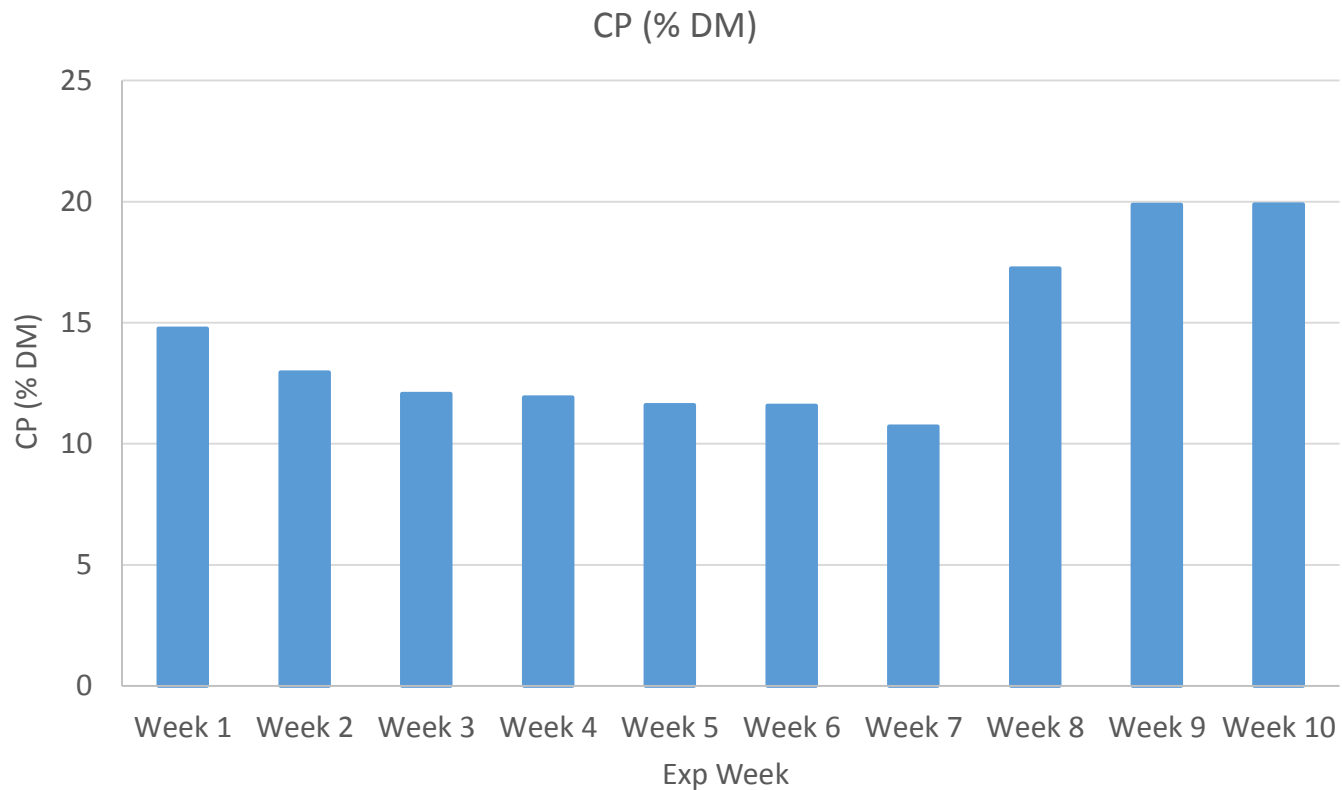
- 20 cows per treatment
- 12 weeks long
 - Milk production
 - DMI
 - BW/BCS
 - Blood/Urine
 - Feed chemistry



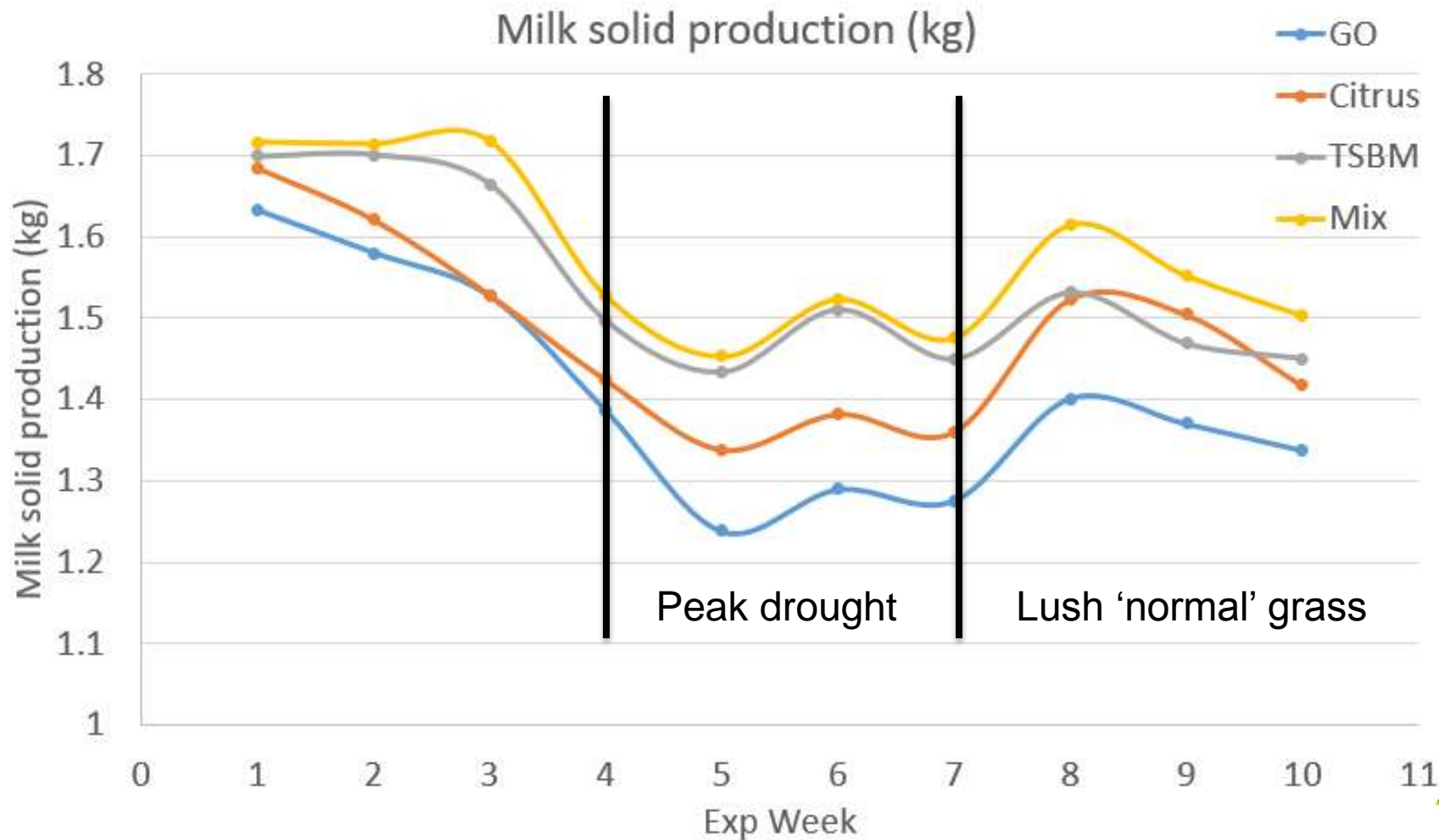
	Grass only
Supplement fed (kg FW)	-
CP (% DM)	18.3
aNDFom (% DM)	35.0
Soluble fiber (% DM)	21.2
Sugars (% DM)	13.8
ME supply (Mcal day ⁻¹)	47
MP supply (g day ⁻¹)	2026



	GO	Citrus	TSBM	Mix
CP formulated (% DM)	18.3	16.4	19.5	18.1
CP observed (% DM)	14.3	13.5	16.1	14.7



	GO	Citrus	TSBM	Mix	S.E.	P-Value
Grass intake (kg DM day ⁻¹)	15.6 ^a	12.8 ^b	15.3 ^{ac}	13.8 ^{bc}	0.47	<.001
Supplement intake (kg DM day ⁻¹)	0 ^a	4.8 ^b	0.8 ^c	3.1 ^d	0.03	<.0001
Total intake (kg DM day ⁻¹)	15.6 ^a	17.6 ^b	16.1 ^{ab}	16.9 ^{ab}	0.48	0.02



Summary

- New feed chemistry provides enhanced understanding of the feeding value of grazed grass
- NDF of grazed grass is extremely digestible under normal growing conditions
- Providing MP may be beneficial at certain times of the year
- CNCPS can help better understand how to complement grass based systems

Thank you!



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