

Effect of pre-graze mowing at different pre-graze masses on cow and pasture performance

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Introduction

- Some farmers target higher than recommended pre-graze pasture masses (to maximise pasture growth) with a belief that mowing before grazing is required to harvest this extra pasture.
- Objectives of this study were to investigate the effect of mowing before grazing at recommended and high pre-graze pasture mass.

Measurements

- Daily milk yield and weekly milk composition
- Fortnightly body condition score
- One week of behaviour measurements
- Weekly farm walks and post-grazing mass
- Weekly pasture nutrient and botanical composition

Results

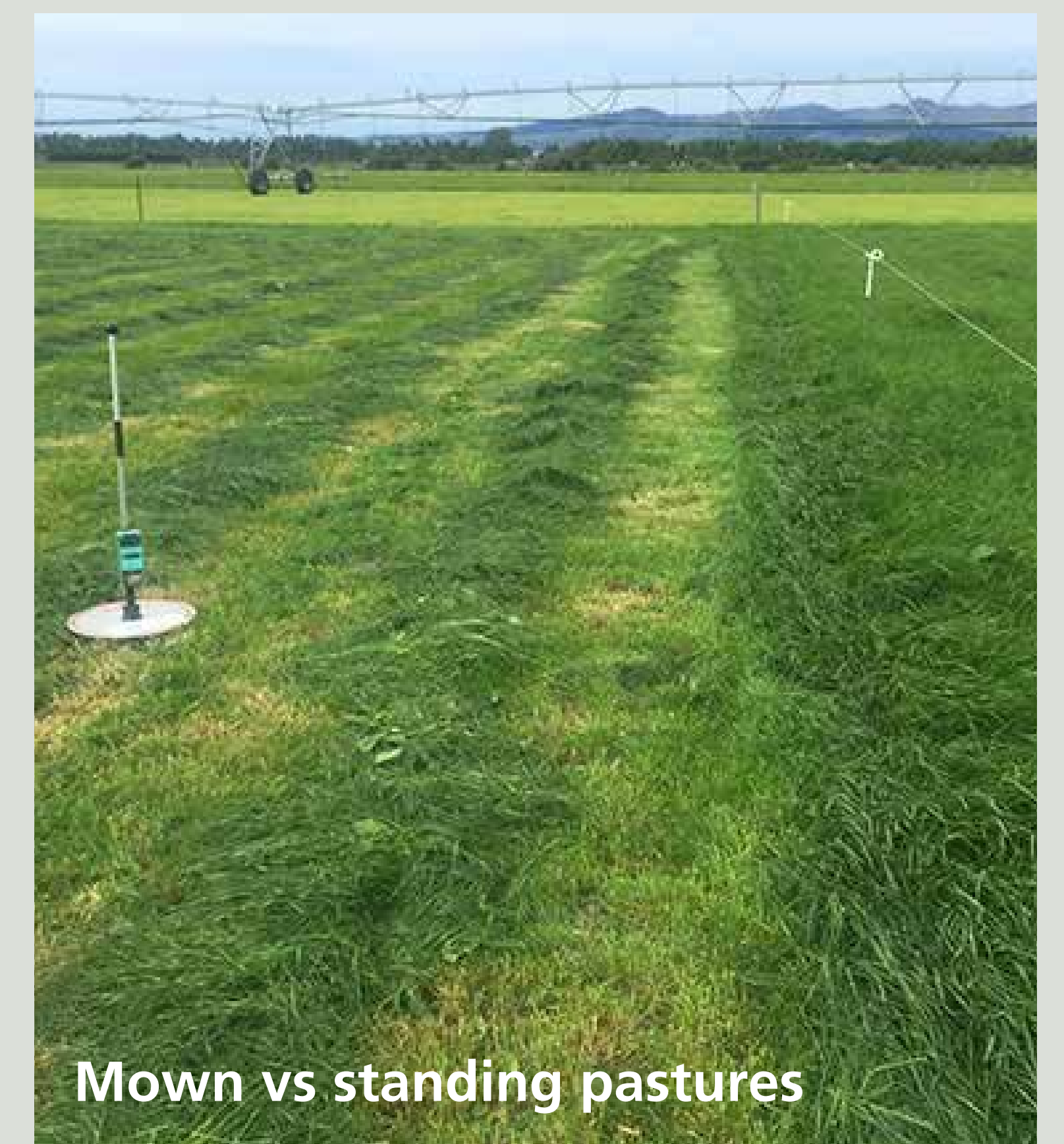
- Cows in MOD produced 6% more milksolids (fat+protein) than in HIGH
- Cows in MOD spent less time grazing than in HIGH
- No effect of harvesting (MOW vs. GRAZE) on cow performance
- MOW reduced pasture density and pasture harvested
- MOW reduce silage made and increased silage fed

Conclusions

Cows offered a MOD pre-graze pasture mass produced more milksolids than those offered a HIGH pre-graze pasture mass and this was not affected by mowing before grazing. Continuous mowing of pastures reduced pasture performance and increased the requirement for imported feed.

Materials and Methods

- Conducted at Lincoln University Research Dairy Farm, Canterbury, NZ for 120 days during spring and summer (Oct - Feb).
- 144 multiparous cows were randomised into 8 farmlets, that were allocated to 1 of 4 treatments in a replicated 2 x 2 factorial study.
- Treatments were two pre-graze pasture masses: 2,800 kg DM/ha, above ground level (MOD), vs. 3,400 kg DM/ha (HIGH), and two harvesting methods: grazing standing pasture (GRAZE), vs. mowing before grazing (MOW).



Variable	Treatment				SED	P-value ¹	
	HIGH-GRAZE	HIGH-MOW	MOD-GRAZE	MOD-MOW		Mass	Harvest
Fat yield (kg d ⁻¹)	0.99	1.00	1.04	1.07	0.02	**	ns
Protein yield (kg d ⁻¹)	0.76	0.77	0.84	0.83	0.02	*	ns
Estimated total DMI (kg d ⁻¹)	15.8	15.7	15.8	15.3	0.6	ns	ns
BCS change (1 – 10 scale)	-0.14	0.12	-0.13	-0.18	0.08	ns	ns
Rotation length (d)	29	28	21	21	0.3	**	ns
Pre-graze mass (kg DM ha ⁻¹)	3446	3156	2890	2705	49	**	*
Post-graze mass (kg DM ha ⁻¹)	1820	1499	1790	1615	18	**	**
Post-mow mass (kg DM ha ⁻¹)		190		143	86.5		ns
Silage fed (t DM ha ⁻¹)	0.07	0.49	0.09	0.48	0.03	ns	**
Silage harvested (t DM ha ⁻¹)	0.55	0.07	0.39	0.00	0.04	ns	**

¹ ns = not significant, * = P < 0.05, ** = P < 0.01

Acknowledgements

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