Autumn rotation length and cutting height affects perennial ryegrass-white clover sward productivity.

P. Phelan¹², B. Keogh³, E. Fitzgerald², I.A. Casey² and J. Humphreys¹
¹Moorepark Dairy Production Research Centre, Teagasc, Fermoy, Co. Cork.
²Department of Chemical & Life Sciences, Waterford Institute of Technology, Cork Road, Waterford.

Introduction

- Tight grazing/cutting during spring and summer can improve clover content in mixed swards.
- Long rotation lengths in autumn are important for extending the grazing season.
- This experiment aimed to investigate the effect of autumn cutting height and rotation length on sward productivity into the following year.

Methods

Study area:
- Plots established in June 2008 on permanent grass-clover sward at Solohead research farm, Tipperary, Ireland (52°51’N, 08°21’W).

Experimental design:
- Two factors, rotation length (3, 6, 8 or 12 weeks) and cutting height (2.7, 3.5, 5 or 5.9 cm).
- Randomised complete block design with five replications.
- Factors were only implemented from July to December 2008.
- March to June 2009: all plots harvested at four week intervals at a cutting height of 4.5 cm.
- Measured total dry matter (DM) yield, clover DM yield, grass DM yield and clover stolon DM mass over time.
- Subjected to ANOVA with sampling date included as repeated measure for stolon DM mass.

Results

- No (P>0.05) interactions between rotation length and cutting height for any of the variables examined.
- Stolon mass was affected (P>0.001) by interactions between (1) sampling date and rotation length and (2) sampling date and cutting height.
- Highest (P<0.001) total herbage and clover herbage DM yields with 6 week rotation and with lower cutting heights.
- Lower (P<0.001) herbage DM yield with the 3 week rotation.
- Stolon mass over time was lowest (P<0.001) under 3 week rotation.
- Cutting height in autumn had no (P>0.05) effect on stolon mass until the sampling date.

Conclusions

- 6 week rotation length between July and December and low cutting heights gave the most agronomically desirable outcome.
- Short (3-week) rotations should be avoided during the autumn.

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