

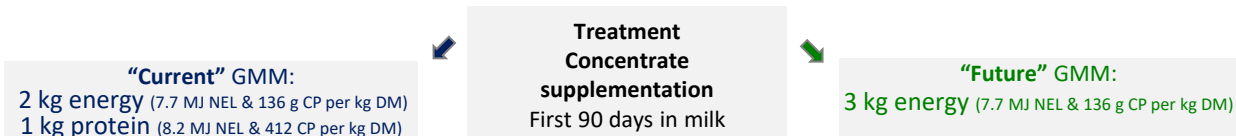
Comparison of a feeding variant of the current and future grassland-based milk production programme in Switzerland

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Introduction

The aim of the Grassland-Based Milk and Meat programme (GMM) is to maintain ruminant production geared to local conditions that are based on fresh and preserved herbage and a reduced use of concentrates. A proposed variant of the future GMM programme would only allow the purchase of concentrates for ruminants with a maximum crude protein (CP) content of 12% per kg dry matter (DM). In this study, variants of the current and future GMM were compared during the first 90 days in milk in an herbage-based feeding system for dairy cows.

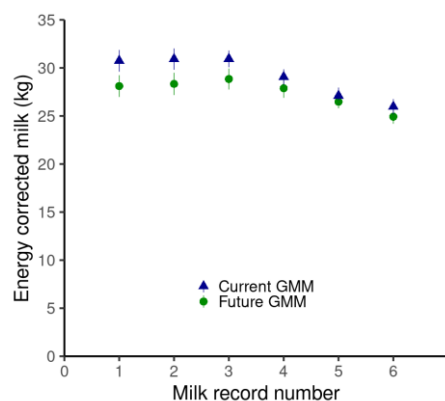
Animals, materials and methods



Results

Results of the first 6 official milk recordings (every 14 d)

	Current GMM	Future GMM	Standard error	P - values
Milk (kg d ⁻¹)	29.6	27.9	0.76	<0.001
Energy corrected milk (kg d ⁻¹)	29.1	27.4	0.78	<0.001
Milk fat (g kg ⁻¹)	40.7	40.3	0.55	0.51
Milk protein (g kg ⁻¹)	30.6	30.8	0.29	0.54
Lactose (g kg ⁻¹)	48.1	48.4	0.20	0.005
Milk urea (mg dl ⁻¹)	19.7	15.9	0.58	<0.001
Somatic cell counts (log 10 ml ⁻¹)	4.58	4.59	0.050	0.94



Conclusion

Even with herbage rations of an average quality regarding nutritive values, the use of a cereal mixture as the sole concentrate supplementation for dairy cows leads to lower milk yields with similar milk fat and protein and reduced milk urea contents compared to a partial protein concentrate supplementation. The future GMM variant has benefits for society as well as disadvantages for milk producers. Overall, more in-depth investigations are needed to study the interaction between forage CP content and reduced protein concentrate supplementation on milk production, nitrogen losses, animal-welfare and fertility.