At grazing, the nutritive value of grass offered to the dairy cows is like a "natural" total mixed ration

L. Delaby [1], L. Leloup [2] and F. Launay [2]

(1) INRAE, Institut Agro, UMR Pegase 35590 Saint Gilles - France
(2) INRAE, Le Pin Experimental Unit, 61310 Gouffern en Auge - France

Introduction

Grass grazed can be the only feed in the ration of dairy cows.

With intake, the nutritive value of grass grazed influences feed supplies.

Better knowledge of grass quality helps manage better grazing to maximise the dairy cows grass utilisation and improve the system global efficiency.

Material and methods

At INRAE Le Pin experimental unit in Normandy, (10.6 °C annual average temperature - 775 ± 135 mm in 188 rainy days) on drained clay-loam soils (6 to 8% OM), with annual N mineral fertilisation (120 to 280 kg/ha/year).

Between 1995 and 2019, **1052 samples of grass** cut at 5cm **before grazing** on permanent or old sown pastures (PreGH: 11.2 ± 2.4 cm / Biomass: 1890 ± 712 kg DM/ha).

Chemical composition analysis : Organic matter (OM) - Crude protein (CP) Neutral and acid detergent fiber (NDF-ADF) - Cellulase digestibility (dCS).

Feeding value (INRA 2018) : Fill unit for lactation (UEL) - Net energy for lactation (UFL 1760 kcal) - Protein digestible in intestine (PDI) - Rumen protein balance (RPB).

Main results - Conclusion

Well managed grass grazed has **a high nutritive value.**

Season has a significant effect on grass feed value, with the lowest being observed in summer.

Season	Spring	Summer	Autumn
CP (g/kg DM)	192	164	195
ADF (g/kg DM)	246	271	248
OM dig (%)	77.5	72.7	72.1
UEL (/kg DM)	0.95	0.98	0.97
UFL (/kg DM)	1.02	0.94	0.91
PDI (g/kg)	102	96	102
RPB (g/kg)	40	16	44

The UFL/UEL and PDI/UFL ratios are typical recommended parameters for TMR formulation.

INRAE