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## Voluntary intake by cattle consuming forage from grasslands of different quality

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**Key words:** voluntary intake, crude fibre, neutral detergent fibre, acid detergent fibre

**Introduction** A good knowledge of voluntary dry matter intake of forage from grasslands in various cattle categories is important for rational grassland management by means of cattle breeding. This paper presents findings from a study of voluntary dry matter intake of forage from grasslands harvested in 2006 by heifers from the suckler cows breeding system.

**Material and methods** The experiment examined three methods of utilisation: intensive (3 cuts/year—first on 30 May followed by cuts at 60d intervals); low intensive (2 cuts/year—first on 15 June with a further cut after 90d); and extensive (2 cuts/year—first on 30 June with a further cut after 90 days). Each method of utilisation was divided with three levels of fertiliser (without fertiliser, P<sub>30</sub> K<sub>60</sub>, N<sub>90</sub> P<sub>30</sub> K<sub>60</sub>). The Fibertec System 2023 FiberCap (FOSS TECATOR) was used to analyse structural fibre. The dominant species in the permanent sward were *Dactylis glomerata*, *Poa pratensis*, *Lolium perenne*, *Trifolium repens* and *Taraxacum*. Feeding trials were conducted on heifers (LW 370-480 kg)—crossbreeds of meat breeds from suckler cows rearing system. Equipment (RIC Insentec) was used for monitoring of voluntary intake of forage from grasslands.

**Results** Table 1 shows that there was a tendency for increase of dry matter intake and a decrease in crude fibre content with increasing intensity of grassland management. Gruber *et al.* (2000) found similar results but a higher level of voluntary dry matter intake (19.9 - 27.6 g/kg LW) by dairy cows. Pozdřšek *et al.* (1998) found dry matter intake of intensively managed grasses conserved by freezing to be 24.3 to 30.7 g/kg LW in heifers with live weight 300 kg. These findings indicate that not only quality of the feeds but also animals have effect on the variability of dry matter intake.

**Table 1** Mean values of crude protein and fibre for the different treatments and voluntary intake.

Var.	1A	1B	1C	2A	2B	2C	3A	3B	3C
CP, % d.m.	16.0	16.7	17.3	12.6	13.8	14.6	10.2	11.3	12.2
CF, % d.m.	24.8	24.9	24.3	27.7	29.5	29.2	30.8	29.2	30.5
NDF, % d.m.	50.9	51.6	52.4	56.6	57.2	55.8	59.4	56.6	60.6
ADF, % d.m.	32.2	31.7	32.3	35.6	36.3	34.9	37.7	36.5	35.6
VI, g/kg LW									
AVG	21.4	21.3	21.1	20.9	20.3	20.5	19.3	19.6	18.0
STD	3.3	3.4	3.5	4.2	3.8	4.6	4.8	3.1	4.8
V%	15.6	16.1	16.6	20.1	18.6	22.3	25.0	16.0	26.4

Legend: 1-Middle intensive 2-Low intensive 3-Extensive A - zero fertiliser B - PK fertiliser C - N<sub>90</sub> PK fertiliser

**Conclusions** Voluntary dry matter intake in cattle is influenced by intensity of grassland management. Further work is needed to study voluntary intake of various categories of cattle from the suckler cows breeding system and especially for dairy cows fed on grasslands.

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