

Fatty acid composition of Mongolian mare milk

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Background and aim

More than 2 million horses are kept outdoors and grazed on natural pastures all year by the Mongolian nomad herders. The aim was to investigate the fat content and the fatty acid composition in summer and autumn in the two different ecological regions.

Materials and methods

Used Mongolian local breed. The composition of fatty acids was determined by GLC.

Results



Steppe



Forest-steppe



Mongolian mare

The average fat content was low. The most abundant fatty acids were palmitic acid (16:0), ALA, and oleic acid (18:1). Oleic acid and palmitoleic acid (16:1) were the main MUFA. The sum of PUFA represented about 28% of total fatty acids, with ALA and LA as the main PUFA. ALA content was higher and the LA/ALA ratio was lower.

Discussion and conclusion

Mongolian mare milk is favourable for human consumption for several reasons: low fat content, lower relative concentration of SFA and a low LA/ALA ratio. Furthermore, the concentration of ALA (omega-3), a fatty acids regarded as favourable in human nutrition, was much higher than in milk from mares fed concentrate supplemented.

Variables	Mean
Milk fat	1.96
C8:0	1.02
C16:0	25.23
C18:0	3.55
C16:1	4.89
C18:1	19.8
C18:2n-6 (LA)	8.10
C18:3n-6 (GLA)	0.74
C18:3n-3 (ALA)	19.50
SFA	45.69
MUFA	26.06
PUFA	28.57
TUFA	54.63