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Czech J. Food Sci.

**Toušová R., Stádník L.,
Ducháček J.:**

Effects of season and time of milking on spontaneous and induced lipolysis in bovine milk fat

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The effects were evaluated of different factors on the level of spontaneous (SPO) and induced (IND) lipolysis as defined by the content of free fatty acids (FFA) in milk. Milk samples were collected at monthly intervals throughout the year from both morning and evening milkings either individually in a milking parlour (SPO; $n = 10$) or from the bulk tank (IND; $n = 10$). The data were analysed using SAS 9.1. More intensive SPO was observed from March to May with higher FFA contents (+0.034 to +0.523 mmol/100 g of fat; $P < 0.05$ – 0.01), and also from September to November (+0.077 to +0.292 mmol/100 g of fat; $P < 0.05$). More intensive SPO was also detected in the evening milk than in that coming from morning milking (+0.062 to

10.550 mmol/100 g of fat, $P < 0.05$ –
0.01). SPO measured immediately after
milking was affected by the season and
time of milking. The content of FFA
characterising IND in bulk milk (0.33–
1.10 mmol/100 g of fat) was higher ($P <$
0.05– 0.001) than that due to SPO in
individual samples (0.21– 0.86 mmol/100
g of fat), especially in those from evening
milking compared to morning milking
(+0.10 to +0.47 vs. +0.12 to +0.22
mmol/100 g of fat; $P < 0.05$ – 0.001).

Keywords:

dairy cow; free fatty acid; lipolysis;
milking; processing

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