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Title: Supplementation with lipid sources alters the ruminal fermentation and duodenal flow of fatty acids in grazing Nellore steers

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1 **Running head:** Lipids in grazing beef cattle alter rumen metabolism

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3 **Supplementation with lipid sources alters the ruminal fermentation and duodenal**
4 **flow of fatty acids in grazing Nellore steers**

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23

24 **Abstract**

25 Lipid supplementation may adversely affect rumen fermentation, microbial abundance,
26 nutrient utilization and the duodenal flow of fatty acids (FA). In a 5 × 5 Latin square
27 design, 10 Nellore steers with ruminal and duodenal cannulas (292 ± 28 kg BW) were fed
28 one of the five following dietary lipid sources in the concentrate, as follow: (1) no
29 additional fat (WF); (2) palm oil (PO) derived from the Palmaceae plant *Orbignya*

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