

Supplementary Table S1. Fatty acid (FA) profile of the two transition diets.

| Item | Diet ¹ (g/100g as feed) ² | |
|---|---|-----------|
| | CO | TRT |
| C8:0 | 8.09 | 7.47 |
| C10:0 | 3.88 | 4.23 |
| C11:0 | 2.67 | 3.45 |
| C12:0 | 12.84 | 12.71 |
| C14:0 | 41.62 | 35.01 |
| C15:0 | 6.91 | 5.55 |
| C16:0 | 2,191.45 | 2,076.24 |
| C16:1 <i>6trans</i> + C16:1 <i>7trans</i> | 21.34 | 11.59 |
| C16:1 <i>7cis</i> | 5.34 | 4.39 |
| C16:1 <i>9cis</i> | 23.27 | 26.04 |
| C17:0 | 20.18 | 25.66 |
| C17:1 <i>9cis</i> | 0 | 5.04 |
| C18:0 | 528.72 | 545.31 |
| C18:1 <i>9cis</i> | 3,843.96 | 3,888.37 |
| C18:1 <i>11cis</i> | 140.68 | 160.17 |
| C18:2 <i>8trans,13trans</i> | 0 | 5.4 |
| C18:2 <i>9cis,12cis</i> | 7,581.28 | 7,647.59 |
| C20:0 | 0 | 4.02 |
| C18:3 <i>6cis,9cis,12cis</i> | 26.42 | 34.6 |
| C18:3 <i>9cis,12cis,15cis</i> | 1,728.6 | 1,580.92 |
| C18:4 <i>6cis,9cis,12cis,15cis</i> | 0 | 8.27 |
| C20:2 <i>11cis,14cis</i> | 4.58 | 5.44 |
| C22:0 | 13.3 | 0 |
| C20:3 <i>8cis,11cis,14cis</i> | 46.87 | 38.08 |
| C21:2 <i>12cis,15cis</i> | 5.34 | 0 |
| C23:0 | 6.98 | 6.2 |
| C24:0 | 15 | 18.54 |
| TOTAL | 16,371.2 | 16,253.8 |
| SFA ³ | 2,851.65 | 2,744.38 |
| MUFA ⁴ | 4,034.58 | 4,095.6 |
| PUFA ⁵ | 9,393.09 | 9,320.31 |
| UFA ⁶ | 13,427.67 | 13,415.9 |
| PUFA n-6 ⁷ | 7,664.49 | 7,725.71 |
| PUFA n-3 ⁸ | 1,728.6 | 1,589.19 |
| SCFA ⁹ | 72.52 | 73.7 |
| MCFA ¹⁰ | 16,159.77 | 16,060.15 |
| LCFA ¹¹ | 92.07 | 72.28 |
| SFA/UFA | 1.22 | 1.21 |
| PUFA/SFA | 0.57 | 0.57 |
| PUFA n-6/PUFA n-3 | 4.43 | 4.86 |

Diet¹: CO = control diet with 12.33 MJ/kg of ME and 0.70% SID Lys; TRT = treatment diet with 12.97 MJ/kg of ME and 0.85% SID Lys.

g/100g as feed²: g per 100 g of product's total quantity

SFA³: Saturated Fatty Acids.

MUFA⁴: Monounsaturated Fatty Acids.

PUFA⁵: Polyunsaturated Fatty Acids.

UFA⁶: Unsaturated Fatty Acids.

PUFA n-6⁷: omega 6 PUFAs

PUFA n-3⁸: omega 3 PUFAs

SCFA⁹: Short Chain Fatty Acids.

MCFA¹⁰: Medium Chain Fatty Acids.

LCFA¹¹: Long Chain Fatty Acids.