**Metabolic and stress responses in dairy cows fed grain-rich diets and submitted to intramammary lipopolysaccharide challenge**

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**Supplementary Table S1** *Ingredients and nutrient composition of the control- and the subacute rumen acidosis (SARA) diets*

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| Item | Control | SARA |
| Ingredients (% of DM) |  |  |
| Grass silage  | 58.0 | 31.0 |
| Hay  | 15.0 | 9.0 |
| Grain mix1 | 23.0 | 14.0 |
| Protein supplement2 | 4.0 | 0 |
| Concentrate mixture3 | 0 | 46.0 |
| Chemical composition (% of DM) |  |  |
| DM | 42.4 | 51.7 |
| Organic matter | 91.4 | 91.9 |
| CP | 16.6 | 17.0 |
| Ether extract | 2.0 | 1.8 |
| ADF | 26.8 | 20.5 |
| NDF | 40.9 | 33.5 |
| Non-fiber carbohydrates4 | 31.8 | 39.6 |
| Starch | 16.1 | 27.2 |
| Net energy of lactation (MJ/kg DM) | 6.66 | 7.44 |
| 1Contained: 50% corn, 47% wheat and 3% mineral and vitamin premix and consisted of (DM-basis): 96.7% organic matter, 11.9% CP, 3.2% ether extract, 14.4% NDF, 67.2% non-fiber carbohydrates, 8.17 MJ net energy of lactation, 2.5 g Calcium, 5.45 g Phosphorus, 7.05 g Sodium, 3.18 g Magnesium, 33,975 IU vitamin A, 5,097 IU vitamin D and 136 mg vitamin E.2Contained: 60% rapeseed meal, 21.5% dried distillers grains with solubles, 8% soybean meal, 3% rye bran, 2.9% sugar beet molasses, 2.6% urea and 2% mineral and vitamin premix and consisted of (DM-basis): 92.0% organic matter, 45.5% CP, 3.4% ether extract, % 28.9 NDF, 13.9 % non-fiber carbohydrates, 7.61 MJ net energy of lactation, 10.23 g Calcium, 10.23 g Phosphorus, 3.41 g Sodium, 5.68 g Magnesium, 18 mg Copper, 80 mg Zinc, 45 mg Manganese, 1 mg Selenium, 0.6 mg Cobalt, 4 mg Iodine, 18182 IU vitamin A, 1818 IU vitamin D3 and 34 mg vitamin E.3 Contained: 63% barley, 18% soybean meal, 9.4% rapeseed meal, 5.9% beet pulp, 2.0% mineral premix (contained 1.13% Calcium, 0.91% Phosphorus, 0.26%, Sodium, 0.50%, 13,683 IU vitamin A, 1,824 IU vitamin D, 46 mg vitamin E, 91 mg Iron, 114 mg Manganese, 68 mg Zinc and 17 mg Copper), 1.15% calcium carbonate, 0.1% salt, 0.5% monocalcium phosphate and consisted of (DM-basis): 93.1% organic matter, 20.8% CP, 2.28% ether extract, 8.92% ADF, 19% NDF, 51% non-fiber carbohydrates, 8.62 MJ net energy of lactation. The concentrate mixture was also offered to the control cows separately at maximum of 4 kg per cow and day to reach a level of approximately 40% concentrate of the total DMI.4Non-fiber carbohydrates = (100 – (CP + NDF + Ash + ether extract)). |