**Supplementary Material**

**Supplementary Table S1** Ingredients and chemical composition of experimental diets

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| Ingredients (g kg-1) | Control diet (C) | Low-energy fibrous diet (F) |
| Barley grain | 315 | 0 |
| Wheat bran | 50 | 100 |
| Sunflower meal (30 % crude protein) | 100 | 52 |
| Soybean meal (44 % crude protein) | 101 | 0 |
| Alfalfa hay | 370 | 660 |
| Beet pulp | 0 | 138 |
| Soybean oil | 40 | 10 |
| L - Lysine HCL | 0.45 | 2.80 |
| DL - Methionine | 0.95 | 2.60 |
| L - Threonine | 0.6 | 1.6 |
| Arginine | 0 | 0.8 |
| Cycostat 66G®1 | 1 | 1 |
| Bacipremix 50®2 | 2 | 2 |
| Calcium carbonate | 1 | 0 |
| Di-calcium phosphate | 10 | 0 |
| Monosodium phosphate | 0 | 21.2 |
| Sodium chloride | 4 | 4 |
| Vitamin/mineral premix3 | 4 | 4 |
| Chemical composition (g kg-1 DM) | Control diet (C) | Low-energy fibrous diet (F) |
| Dry matter (DM; g kg-1) | 951 | 938 |
| Organic matter | 917 | 881 |
| Neutral detergent fibre | 333 | 443 |
| Acid detergent fibre | 168 | 266 |
| Acid detergent lignin | 25 | 44 |
| Crude protein | 174.7 | 162.0 |
| Gross energy (MJ Kg-1 DM)  | 18.69 | 18.31 |

1Alpharma, Antwerp (Belgium), provides 66 ppm of robenidine.

2Andreés Pintaluba SA, Reus (Spain), provides 100 ppm of zinc bacitracin.

3Contains (g kg-1): thiamine: 0.25, riboflavin: 1.5, calcium pantothenate: 5.0, pyridoxine: 0.1, nicotinic acid: 12.5, retinol: 2.0, cholecalciferol: 0.1, α-tocopherol: 15.0, phytylmenaquinone: 0.5, cyanobalamin: 0.0006, choline chloride: 100.0, MgSO4 H2O: 7.5, ZnO: 30.0; FeSO4 7H2O: 20.0, CuSO4 5H2O: 3.0, KI: 0.5, CoCl2 6H2O: 0.2, and Na2SeO3: 0.03.