



Article

## Supplementary material

Table S1. Calculated major nutrients of the experimental diets

| %               | Experiment 1 | Experiment 2 |
|-----------------|--------------|--------------|
| Dry matter      | 89.19        | 89.88        |
| Gross Protein   | 13.57        | 13.14        |
| Gross Fat       | 4.78         | 5.05         |
| Linoleic acid   | 1.24         | 1.11         |
| Gross fiber     | 4.39         | 3.41         |
| FAD             | 5.74         | 4.79         |
| FND             | 14.11        | 12.93        |
| Starch          | 49.14        | 46.98        |
| Starch+suger    | 52.82        | 52.31        |
| Ash             | 3.82         | 3.99         |
| Calcium         | 0.42         | 0.32         |
| Phosphoro total | 0.37         | 0.40         |
| Lys             | 0.77         | 0.75         |
| EN (mcal/kg)    | 2.45         | 2.48         |
| ED (Mcal/kg)    | 3.36         | 3.44         |

**Experiment 1:** Ingredients (%): Wheat, 35.00; Corn, 30.00; Bisquit, 8.53; Sunflower 35, 8.00; Rye, 7.46; Soya 47, 3.23; Rapeseed, 2.00; Recycled, 1.50; Fat 3/5 disc, 1.00; Fat 3/5 1.00; Calcium carbonate, 0.80; Lysine 50 liquide, 0.60; Salt ,0.40; Premix, 0.30; L-Threonine, 0.08; Surfactant acid, 0.05; Enzymes  $\beta$ -xylanase, 0.04; Phytase 5000 liquide 0.01. Premix in feed: Vitamin A 4 M UI/Kg; Vitamin D<sub>3</sub> 0.4 M UI/Kg 25-OH D<sub>3</sub>; Vitamin E 40 mg/Kg; Vitamin B<sub>1</sub> 2 mg / Kg; Vitamin B<sub>2</sub> 2 mg/Kg; Vitamin B<sub>6</sub> 3 mg/Kg; Vitamin B<sub>12</sub> 0.02 mg/Kg; Vitamin K<sub>3</sub> 2 mg/Kg; Nicotinic acid 20 mg/Kg; Pantothenic acid 10 mg/Kg; Choline chloride 100 mg/Kg; Manganese oxide 40 mg/Kg; Zinc oxide 100 mg/Kg; Ferrous sulphate 300 mg /Kg; Copper sulphate 15 mg/Kg; Yodure 0.3 mg/Kg; Sodium selenite 0.40 mg/Kg.

**Experiment 2:** Ingredients (%): Triticale, 30.00; Wheat, 30.00; Bisquit, 10.00; Barley, 8.79; Soya 47, 8.53; Rice, 5.87; Recycled, 2.00; Fat 3/5 disc, 1.11; Fat 3/5, 1.00; Vegetable glycerol, 1.00; Calcium carbonate, 0.56; Lysine 50 liquide, 0.43; Salt, 0.40; Premix, 0.20; L-Threonine, 0.08; Surfactant acid, 0.05; DL-methionine, 0.03; Enzymes  $\beta$ -xylanase, 0.02; Phytase 5000 liquide, 0.01.; Premix in feed: Vitamin A 5 M UI/Kg; Vitamin D<sub>3</sub> 1.0 M UI/Kg 25-OH D<sub>3</sub>; Vitamin E 30 mg/Kg; Vitamin B<sub>1</sub> 2.0 mg/Kg; Vitamin B<sub>2</sub> 2.0 mg/Kg; Vitamin B<sub>6</sub> 3.0 mg /Kg; Vitamin B<sub>12</sub> 0.020 mg/Kg; Vitamin K<sub>3</sub> 2.0 mg/Kg; Nicotinic acid 20 mg/Kg; Pantothenic acid 10 mg/Kg; Choline chloride 100 mg/Kg; Manganese oxide 40 mg/Kg; Zinc oxide 100 mg/Kg; Ferrous sulphate 90 mg/Kg; Copper sulphate 15 mg /Kg; Yodure 0.5 mg/Kg; Sodium selenite 0.40 mg/Kg

6



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7