**Supplementary table 1.** Basic dietary composition and nutritional levels

|  |  |  |  |
| --- | --- | --- | --- |
|  | Piglet(5–10 kg)  | Growing pig(20–60 kg) | Fattening pig(60 kg–210 day) |
| **Ingredients** |
| Corn | 49.5 | 49.9 | 53.2 |
| Soybean meal | 23.5 | 15 | 14 |
| Wheat bran | 15 | 22 | 18 |
| Alfalfa meal | 5 | 8 | 9 |
| CaHPO4 | 1.8 | 0.6 | 0.6 |
| Lysine | 0.9 | 0.1 | 0.5 |
| L-Methionine | 0.5 | 0.4 | 0.4 |
| Soya bean oil | 2.6 | 2.5 | 2.8 |
| NaCl | 0. 2 | 0.5 | 0.5 |
| Premix1 | 11) | 12) | 13) |
| Total | 100 | 100 | 100 |
| **Nutrient levels** |
| Digestible energy (MJ/kg) | 3 251.04 | 3 115.65 | 3 152.55 |
| Crude protein | 19.614 | 16.278 | 15.965 |
| Crude fiber | 3.842 | 5.336 | 5.422 |
| Ca | 0.742 | 0.454 | 0.456 |
| Total P | 0.82 | 0.581 | 0.568 |
| Lysine | 1.185 | 0.888 | 1.137 |
| Methionine + Cystine | 0.495 | 0.396 | 0.396 |

1 Premix supplied per kg diet: FeSO4, 748 mg; ZnSO4, 477 mg; CuSO4, 26 mg; MnSO4, 12.8 mg; KIO3, 0.26 mg; Na2SeO3, 0.57 mg; vitamin A, 2 276 IU; vitamin D, 228 IU; vitamin E, 11 IU; vitamin K, 2.2 mg; vitamin B1, 1.3 mg; vitamin B2, 3.1 mg; vitamin B3, 23 mg; vitamin B5, 13.4 mg; vitamin B7, 0.11 mg; vitamin B9, 0.68 mg; vitamin B12, 23 μg.

2 Premix supplied per kg diet: FeSO4, 564 mg; ZnSO4, 505 mg; CuSO4, 19 mg; MnSO4, 6.8 mg; KIO3, 0.24 mg; Na2SeO3, 1.0 mg; vitamin A, 1 230 IU; vitamin D, 189 IU; vitamin E, 10 IU; vitamin K, 2.5 mg; vitamin B1, 1.0 mg; vitamin B2, 2.5 mg; vitamin B3, 13 mg; vitamin B5, 10 mg; vitamin B7, 0.09 mg; vitamin B9, 0.57 mg; vitamin B12, 10 μg.

3 Premix supplied per kg diet: FeSO4, 62 mg; ZnSO4, 413 mg; CuSO4, 16 mg; MnSO4, 7.8 mg; KIO3, 0.24 mg; Na2SeO3, 0.96 mg; vitamin A, 1 225 IU; vitamin D, 118 IU; vitamin E, 10 IU; vitamin K, 2.1 mg; vitamin B1, 1.0 mg; vitamin B2, 2.1 mg; vitamin B3, 9 mg; vitamin B5, 10 mg; vitamin B7, 0.09 mg; vitamin B9, 0.57 mg; vitamin B12, 10 μg.

**Supplementary table 2.** Primer sequences of PCR

|  |  |
| --- | --- |
| Gene | Primer sequences (5'→3') |
| MyHC I | F: CGACACACCTGTTGAGAAGR: AGATGCGGATGCCCTCCA |
| MyHC IIa | F: GGGCTCAAACTGGTGAAGCR: AGATGCGGATGCCCTCCA |
| MyHC IIb | F: CTTCACTGGCGCAGCAGGTR: AGATGCGGATGCCCTCCA |
| MyHC IIx | F: GTTCTGAAGAGGGTGGTACR: AGATGCGGATGCCCTCCA |
| ACTB | F: TTTCTTCTGCCATTTTCCTR: ATACACCCACAGCACCTT |