**Supplemental Table 1: Diet composition**

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| --- | --- | --- | --- | --- |
|  | **Gestation** | **Lactation** | **Starter** | **Grower** |
| **1st phase** | **2nd phase** |
| **Ingredients (g.kg-1 fresh matter)** |  |  |  |  |  |
| Wheat | 229 | 256 | - | 232 | 262 |
| Corn | 110 | 120 | - | 250 | 160 |
| Barley | 348 | 257 | 453 | 241 | 255.5 |
| Wheat bran | 159 | 100 | - | - | 50 |
| Soybean meal | 100 | 180 | 175 | 226 | 190 |
| Soybean protein | - | - | 25 | - | - |
| Dehydrated whey | - | - | 200 | - | - |
| Refatted skim-milk | - | - | 80 | - | - |
| Molasse | - | 30 | - | - | 30 |
| Palm oil | 20 | 20 | 23 | 5.0 | 20 |
| Maltodextrin or scFOS | 3.3 | 1.5 | 1.5 | 1.5 | - |
| Calcium carbonate | 17.3 | 12.0 | 14.1 | 11.3 | 12.9 |
| Bicalcium phosphate | 3.0 | 10.2 | - | - | 5.0 |
| Sodium chloride | 4.5 | 4.5 | - | 4.0 | 4.5 |
| Trace element and vitamin mix1 | 5.0 | 5.0 | 5.0 | 5.0 | 6.1 |
|  |  |  |  |  |  |

1The premix (Cooperl, Lamballe, France) supplied per kg of diet: retinol 10,000 UI, cholecalciferol 1,500 UI, -tocopherol 45 mg, menadione 2 mg, thiamine 2 mg, riboflavin 4 mg, niacin 20 mg, D-pantothenic acid 10.9 mg, pyridoxine 3 mg, D-biotin 0.2 mg, folic acid 3 mg, vitamin B12 20 µg, choline  500 mg, Fe 81.5 mg as iron carbonate and sulfate, Cu 10 mg as copper sulfate, Mn 40 mg as manganese oxide, Zn 99.2 mg as zinc oxide, Co 0.1 mg as cobalt carbonate, I 0.6 mg and Se 0.3 mg.