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| --- | --- | --- | --- | --- | --- |
| Supplementary Table S1 Composition of the diets (%) | | | | | |
| Diets | | | | |  |
| Layer | Pre-lay | Pullet | Grower | Starter |  |
| 20 to 28 wk | 16 to 19 wk | 10 to15 wk | 4 to 9 wk | 0 to 3 wk |  |
|  |  |  |  |  | Ingredients |
| 51.55 | 41.65 | 50.68 | 55.24 | 61.26 | Corn (yellow) |
| 31.89 | 20.85 | 17.48 | 30.35 | 27.94 | Soybean meal 44% |
| - | -  - | -  - | - | 5.00 | Corn gluten meal |
| - | - | - | 10.00 | - | Wheat |
| - | 20.00 | 20.00 | - | - | Wheat middling |
| - | 8.00 | 8.00 | - | - | Wheat bran |
| 4.80 | 2.80 | - | 0.12 | 1.00 | Oil |
| 9.20 | 4.60 | 2.09 | 1.78 | 1.66 | Oyster shell |
| 1.50 | 1.12 | 0.89 | 1.54 | 1.93 | Dicalcium phosphate |
| 0.39 | 0.27 | 0.28 | 0.34 | 0.37 | Salt |
| 0.17 | 0.13 | 0.07 | 0.12 | 0.14 | DL- Metionine |
| 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | Vitamin-mineral premix1 |
|  |  |  | Calculated nutrient composition (as- fed basis) | | |
| 12.01 | 11.50 | 11.50 | 11.92 | 12.34 | ME (MJ/kg) |
| 18.20 | 16.8 | 16.00 | 19.00 | 20.50 | Crud protein |
| 3.52 | 4.96 | 4.95 | 3.79 | 3.61 | Crud fiber |
| 1.00 | 0.89 | 0.81 | 1.07 | 1.16 | Lysine |
| 0.77 | 0.67 | 0.60 | 0.76 | 0.86 | Met + Cys |
| 3.91 | 2.10 | 1.07 | 1.10 | 1.15 | Ca |
| 0.40 | 0.42 | 0.36 | 0.42 | 0.48 | Available p |
| 0.18 | 0.15 | 0.15 | 0.15 | 0.16 | Na |

1Provided per kilogram of diet (0-10 wk): vitamin A, 13,000 IU; vitamin D3, 3,000 IU; vitamin E, 25 IU; vitamin K, 3 mg; thiamine, 2 mg; riboflavin, 5 mg; pantothenic acid, 15 mg; niacin, 60 mg; choline, 200 mg; vitamin B12, 0.02 mg; pyridoxine, 5 mg; folic acid, 0.75 mg; biotin, 0.2 mg; Mn, 60 mg; Zn, 60 mg; Fe, 60 mg; Cu, 8 mg; I, 1.1 mg; Se, 0.25 mg; and cobalt, 0.25 mg.

1Provided per kilogram of diet (11-19 wk): vitamin A, 10,000 IU; vitamin D3, 2,000 IU; vitamin E, 25 IU; vitamin K, 3 mg; thiamine, 2 mg; riboflavin, 5 mg; pantothenic acid, 12 mg; niacin, 40 mg; choline, 200 mg; vitamin B12, 0.01 mg; pyridoxine, 5 mg; folic acid, 0.75 mg; biotin, 0.1 mg; Mn, 60 mg; Zn, 60 mg; Fe, 60 mg; Cu, 6 mg; I, 1.1 mg; Se, 0.25 mg; and cobalt, 0.15 mg.

1Provided per kilogram of diet (20-28 wk): vitamin A, 10,000 IU; vitamin D3, 2,500 IU; vitamin E, 20 IU; vitamin K, 3 mg; thiamine, 2 mg; riboflavin, 5 mg; pantothenic acid, 12 mg; niacin, 40 mg; choline, 200 mg; vitamin B12, 0.015 mg; pyridoxine, 5 mg; folic acid, 0.75 mg; biotin, 0.05 mg; Mn, 70 mg; Zn, 60 mg; Fe, 60 mg; Cu, 8 mg; I, 1.1 mg; Se, 0.25 mg; and cobalt, 0.15 mg.