**Supplementary Table S1** Elementary statistics (Mean + Standard deviation) on egg quality traits and feather condition per temperature condition

|  |  |  |
| --- | --- | --- |
|  | Hot condition  (28-30°C) | Thermo-neutral condition (18-20°C) |
| Egg weight (g) | 55.7+5.0 | 55.9+5.3 |
| Egg width (mm) | 42.9+1.5 | 42.8+1.4 |
| Egg shape index (mm.g-1) | 3321+130 | 3332+139 |
| Yolk weight (g) | 15.3+1.5 | 14.9+1.6 |
| Yolk proportion (%) | 27.6+2.2 | 26.7+2.2 |
| Shell weight (g) | 5.20+0.72 | 5.52+0.96 |
| Shell proportion (%) | 9.4+1.1 | 9.9+1.7 |
| Albumen weight (g) | 35.2+4.0 | 35.6+4.2 |
| Albumen proportion (%) | 63.1+2.9 | 63.5+3.6 |
| Albumen height (mm) | 4.2+1.3 | 3.9+1.3 |
| Haugh units | 600+159 | 566+165 |
| Synthetic color index of the yolk | 23.9+8.6 | 18.0+9.3 |
| Luminance of the yolk | 68.2+4.2 | 68.7+3.8 |
| Redness of the yolk | -4.6+1.4 | -3.5+1.2 |
| Yellowness of the yolk | 48.9+7.0 | 54.1+9.2 |
| Synthetic color index of the shell | 16.1+8.6 | 14.7+8.5 |
| Luminance of the shell | 63.9+4.6 | 63.0+4.5 |
| Redness of the shell | 17.3+3.2 | 17.7+2.9 |
| Yellowness of the shell | 30.6+.9 | 30.6+.7 |
| Shell breaking strength (N) | 34.1+7.5 | 37.4+7.4 |
| Static stiffness (N) | 160+32 | 176+31 |
| Meat and blood spots | 0.51+0.58 | 0.59+0.60 |
| Cracked vitelline membrane (%) | 0.55+0.09 | 0.97+0.07 |
| Belly feathering score | 0.28+0.65 | 0.18+0.51 |
| Back feathering score | 0.61+0.89 | 0.57+0.83 |
| Neck feathering score | 0.25+0.61 | 0.25+0.57 |