# Broiler Performance & Nutrition Supplement

broiler

Cobb*500*™

cobb-vantress.com

# Cobb500 Broiler Performance & Nutrition Supplement

## Introduction

This supplement presents broiler performance and yield targets for your Cobb500 broilers, together with recommendations on nutritional specifications designed to help achieve these targets.

Broiler performance varies from country to country; these targets are based on a combination of field performance results and experience from around the world. The performance data included in this supplement is a blended combination from both the Cobb Male and the CobbMX male, and actual flock performance attained may be different than the values shown in this manual due to individual male line traits. The growth rates shown are the targets for achieving cost-efficient performance.

The performance objectives in this supplement are displayed in both metric and imperial configurations:

Metric Imperial

The key micronutrients in particular are well known for their effect on the development and mineralization of bone. It is essential that adequate levels of these are presented to the bird throughout their development. Supplementation of compound rations with whole or cracked whole wheat can significantly deplete levels of calcium and phosphorus.

Quality and availability of raw materials may require nutrient levels to be adjusted. Formulations will need to be 'fine tuned' to suit your specific requirements and environment.

Please contact your local Cobb technical representative to help develop a program designed specifically to suit your own local conditions based on the advice and information contained in this supplement and the main Cobb Broiler Management Guide.

Revised April 2012

# Performance objectives - metric

## AS HATCHED

| Age days | Weight for Age | Daily Gain (g) | Average Daily Gain (g) | Cumulative Feed Conversion | Daily Feed Consumption (g) | Cumulative Feed Consumption (g) |
|---|---|---|---|---|---|---|
| 0 | 42 | | | | | |
| 1 | 52 | 10 | | | | |
| 2 | 66 | 14 | | | | |
| 3 | 81 | 15 | | | | |
| 4 | 100 | 19 | | | | |
| 5 | 122 | 22 | | | | |
| 6 | 148 | 26 | | | | |
| **7** | **177** | **29** | **25.3** | **0.847** | | **150** |
| 8 | 208 | 31 | 26.0 | 0.865 | 30 | 180 |
| 9 | 242 | 34 | 26.9 | 0.888 | 35 | 215 |
| 10 | 279 | 37 | 27.9 | 0.914 | 40 | 255 |
| 11 | 320 | 41 | 29.1 | 0.938 | 45 | 300 |
| 12 | 364 | 44 | 30.3 | 0.962 | 50 | 350 |
| 13 | 410 | 46 | 31.5 | 0.988 | 55 | 405 |
| **14** | **459** | **49** | **32.8** | **1.013** | **60** | **465** |
| 15 | 511 | 52 | 34.1 | 1.039 | 66 | 531 |
| 16 | 567 | 56 | 35.4 | 1.063 | 72 | 603 |
| 17 | 626 | 59 | 36.8 | 1.088 | 78 | 681 |
| 18 | 688 | 62 | 38.2 | 1.112 | 84 | 765 |
| 19 | 753 | 65 | 39.6 | 1.135 | 90 | 855 |
| 20 | 821 | 68 | 41.1 | 1.158 | 96 | 951 |
| **21** | **891** | **70** | **42.4** | **1.182** | **102** | **1053** |
| 22 | 964 | 73 | 43.8 | 1.205 | 109 | 1162 |
| 23 | 1039 | 75 | 45.2 | 1.230 | 116 | 1278 |
| 24 | 1115 | 76 | 46.5 | 1.257 | 123 | 1401 |
| 25 | 1193 | 78 | 47.7 | 1.283 | 130 | 1531 |
| 26 | 1272 | 79 | 48.9 | 1.311 | 137 | 1668 |
| 27 | 1353 | 81 | 50.1 | 1.339 | 144 | 1812 |
| **28** | **1436** | **83** | **51.3** | **1.367** | **151** | **1963** |
| 29 | 1521 | 85 | 52.4 | 1.394 | 158 | 2121 |
| 30 | 1608 | 87 | 53.6 | 1.422 | 165 | 2286 |
| 31 | 1697 | 89 | 54.7 | 1.448 | 172 | 2458 |
| 32 | 1788 | 91 | 55.9 | 1.475 | 179 | 2637 |
| 33 | 1880 | 92 | 57.0 | 1.502 | 186 | 2823 |
| 34 | 1973 | 93 | 58.0 | 1.529 | 193 | 3016 |
| **35** | **2067** | **94** | **59.1** | **1.556** | **200** | **3216** |
| 36 | 2162 | 95 | 60.1 | 1.581 | 202 | 3418 |
| 37 | 2257 | 95 | 61.0 | 1.604 | 203 | 3621 |
| 38 | 2352 | 95 | 61.9 | 1.627 | 205 | 3826 |
| 39 | 2447 | 95 | 62.7 | 1.648 | 206 | 4032 |
| 40 | 2542 | 95 | 63.6 | 1.668 | 208 | 4240 |
| 41 | 2637 | 95 | 64.3 | 1.687 | 209 | 4449 |
| **42** | **2732** | **95** | **65.0** | **1.705** | **210** | **4659** |
| 43 | 2826 | 94 | 65.7 | 1.724 | 212 | 4871 |
| 44 | 2919 | 93 | 66.3 | 1.742 | 214 | 5085 |
| 45 | 3011 | 92 | 66.9 | 1.761 | 216 | 5301 |
| 46 | 3102 | 91 | 67.4 | 1.779 | 218 | 5519 |
| 47 | 3192 | 90 | 67.9 | 1.798 | 220 | 5739 |
| 48 | 3281 | 89 | 68.4 | 1.817 | 222 | 5961 |
| **49** | **3369** | **88** | **68.8** | **1.836** | **224** | **6185** |
| 50 | 3456 | 87 | 69.1 | 1.855 | 225 | 6410 |
| 51 | 3542 | 86 | 69.5 | 1.874 | 226 | 6636 |
| 52 | 3627 | 85 | 69.8 | 1.892 | 226 | 6862 |
| 53 | 3711 | 84 | 70.0 | 1.910 | 227 | 7089 |
| 54 | 3794 | 83 | 70.3 | 1.928 | 227 | 7316 |
| 55 | 3876 | 82 | 70.5 | 1.946 | 228 | 7544 |
| **56** | **3958** | **82** | **70.7** | **1.964** | **228** | **7772** |

# Performance objectives - metric

## FEMALES

| Age days | Weight for Age | Daily Gain (g) | Average Daily Gain (g) | Cumulative Feed Conversion | Daily Feed Consumption (g) | Cumulative Feed Consumption (g) |
|---|---|---|---|---|---|---|
| 0 | 41 | | | | | |
| 1 | 51 | 10 | | | | |
| 2 | 65 | 14 | | | | |
| 3 | 80 | 15 | | | | |
| 4 | 99 | 19 | | | | |
| 5 | 121 | 22 | | | | |
| 6 | 146 | 25 | | | | |
| **7** | **175** | **29** | **25.0** | **0.876** | | **150** |
| 8 | 205 | 30 | 25.6 | 0.878 | 30 | 180 |
| 9 | 237 | 32 | 26.3 | 0.907 | 35 | 215 |
| 10 | 270 | 33 | 27.0 | 0.944 | 40 | 255 |
| 11 | 309 | 39 | 28.1 | 0.968 | 44 | 299 |
| 12 | 351 | 42 | 29.3 | 0.989 | 48 | 347 |
| 13 | 396 | 45 | 30.5 | 1.008 | 52 | 399 |
| **14** | **443** | **47** | **31.6** | **1.029** | **57** | **456** |
| 15 | 491 | 48 | 32.7 | 1.055 | 62 | 518 |
| 16 | 542 | 51 | 33.9 | 1.079 | 67 | 585 |
| 17 | 595 | 53 | 35.0 | 1.104 | 72 | 657 |
| 18 | 652 | 57 | 36.2 | 1.126 | 77 | 734 |
| 19 | 713 | 61 | 37.5 | 1.146 | 83 | 817 |
| 20 | 778 | 65 | 38.9 | 1.165 | 89 | 906 |
| **21** | **844** | **66** | **40.2** | **1.186** | **95** | **1001** |
| 22 | 911 | 67 | 41.4 | 1.210 | 101 | 1102 |
| 23 | 979 | 68 | 42.6 | 1.235 | 107 | 1209 |
| 24 | 1048 | 69 | 43.7 | 1.261 | 113 | 1322 |
| 25 | 1118 | 70 | 44.7 | 1.289 | 119 | 1441 |
| 26 | 1190 | 72 | 45.8 | 1.317 | 126 | 1567 |
| 27 | 1264 | 74 | 46.8 | 1.345 | 133 | 1700 |
| **28** | **1341** | **77** | **47.9** | **1.372** | **140** | **1840** |
| 29 | 1419 | 78 | 48.9 | 1.400 | 146 | 1986 |
| 30 | 1498 | 79 | 49.9 | 1.427 | 152 | 2138 |
| 31 | 1578 | 80 | 50.9 | 1.455 | 158 | 2296 |
| 32 | 1660 | 82 | 51.9 | 1.482 | 164 | 2460 |
| 33 | 1744 | 84 | 52.8 | 1.509 | 171 | 2631 |
| 34 | 1829 | 85 | 53.8 | 1.536 | 178 | 2809 |
| **35** | **1914** | **85** | **54.7** | **1.564** | **185** | **2994** |
| 36 | 1999 | 85 | 55.5 | 1.591 | 186 | 3180 |
| 37 | 2084 | 85 | 56.3 | 1.616 | 187 | 3367 |
| 38 | 2169 | 85 | 57.1 | 1.639 | 188 | 3555 |
| 39 | 2254 | 85 | 57.8 | 1.661 | 189 | 3744 |
| 40 | 2339 | 85 | 58.5 | 1.682 | 190 | 3934 |
| 41 | 2425 | 86 | 59.1 | 1.701 | 191 | 4125 |
| **42** | **2511** | **86** | **59.8** | **1.719** | **192** | **4317** |
| 43 | 2596 | 85 | 60.4 | 1.738 | 194 | 4511 |
| 44 | 2679 | 83 | 60.9 | 1.757 | 196 | 4707 |
| 45 | 2760 | 81 | 61.3 | 1.777 | 198 | 4905 |
| 46 | 2841 | 81 | 61.8 | 1.797 | 200 | 5105 |
| 47 | 2922 | 81 | 62.2 | 1.816 | 202 | 5307 |
| 48 | 3003 | 81 | 62.6 | 1.835 | 204 | 5511 |
| **49** | **3084** | **81** | **62.9** | **1.854** | **206** | **5717** |
| 50 | 3165 | 81 | 63.3 | 1.871 | 206 | 5923 |
| 51 | 3246 | 81 | 63.6 | 1.888 | 206 | 6129 |
| 52 | 3325 | 79 | 63.9 | 1.905 | 206 | 6335 |
| 53 | 3404 | 79 | 64.2 | 1.922 | 206 | 6541 |
| 54 | 3483 | 79 | 64.5 | 1.937 | 206 | 6747 |
| 55 | 3562 | 79 | 64.8 | 1.952 | 206 | 6953 |
| **56** | **3641** | **79** | **65.0** | **1.966** | **206** | **7159** |

# Performance objectives - metric

## MALES

| Age days | Weight for Age | Daily Gain (g) | Average Daily Gain (g) | Cumulative Feed Conversion | Daily Feed Consumption (g) | Cumulative Feed Consumption (g) |
|---|---|---|---|---|---|---|
| 0 | 43 | | | | | |
| 1 | 53 | 10 | | | | |
| 2 | 67 | 14 | | | | |
| 3 | 82 | 15 | | | | |
| 4 | 101 | 19 | | | | |
| 5 | 123 | 22 | | | | |
| 6 | 150 | 27 | | | | |
| **7** | **179** | **29** | **25.6** | **0.844** | | **151** |
| 8 | 211 | 32 | 26.4 | 0.858 | 30 | 181 |
| 9 | 247 | 36 | 27.4 | 0.874 | 35 | 216 |
| 10 | 288 | 41 | 28.8 | 0.889 | 40 | 256 |
| 11 | 331 | 43 | 30.1 | 0.912 | 46 | 302 |
| 12 | 377 | 46 | 31.4 | 0.939 | 52 | 354 |
| 13 | 424 | 47 | 32.6 | 0.972 | 58 | 412 |
| **14** | **475** | **51** | **33.9** | **1.000** | **63** | **475** |
| 15 | 531 | 56 | 35.4 | 1.026 | 70 | 545 |
| 16 | 592 | 61 | 37.0 | 1.051 | 77 | 622 |
| 17 | 657 | 65 | 38.6 | 1.075 | 84 | 706 |
| 18 | 724 | 67 | 40.2 | 1.101 | 91 | 797 |
| 19 | 793 | 69 | 41.7 | 1.127 | 97 | 894 |
| 20 | 864 | 71 | 43.2 | 1.154 | 103 | 997 |
| **21** | **938** | **74** | **44.7** | **1.179** | **109** | **1106** |
| 22 | 1014 | 76 | 46.1 | 1.206 | 117 | 1223 |
| 23 | 1093 | 79 | 47.5 | 1.231 | 123 | 1346 |
| 24 | 1175 | 82 | 49.0 | 1.259 | 133 | 1479 |
| 25 | 1260 | 85 | 50.4 | 1.286 | 141 | 1620 |
| 26 | 1348 | 88 | 51.8 | 1.312 | 148 | 1768 |
| 27 | 1439 | 91 | 53.3 | 1.336 | 155 | 1923 |
| **28** | **1531** | **92** | **54.7** | **1.362** | **162** | **2085** |
| 29 | 1626 | 95 | 56.1 | 1.387 | 170 | 2255 |
| 30 | 1722 | 96 | 57.4 | 1.413 | 178 | 2433 |
| 31 | 1819 | 97 | 58.7 | 1.439 | 184 | 2617 |
| 32 | 1917 | 98 | 59.9 | 1.466 | 194 | 2811 |
| 33 | 2016 | 99 | 61.1 | 1.494 | 201 | 3012 |
| 34 | 2116 | 100 | 62.2 | 1.522 | 208 | 3220 |
| **35** | **2217** | **101** | **63.3** | **1.549** | **215** | **3435** |
| 36 | 2319 | 102 | 64.4 | 1.575 | 217 | 3652 |
| 37 | 2422 | 103 | 65.5 | 1.598 | 219 | 3871 |
| 38 | 2526 | 104 | 66.5 | 1.620 | 221 | 4092 |
| 39 | 2631 | 105 | 67.5 | 1.640 | 223 | 4315 |
| 40 | 2737 | 106 | 68.4 | 1.659 | 225 | 4540 |
| 41 | 2844 | 107 | 69.4 | 1.676 | 226 | 4766 |
| **42** | **2953** | **109** | **70.3** | **1.691** | **228** | **4994** |
| 43 | 3060 | 107 | 71.2 | 1.707 | 230 | 5224 |
| 44 | 3165 | 105 | 71.9 | 1.724 | 232 | 5456 |
| 45 | 3268 | 103 | 72.6 | 1.741 | 234 | 5690 |
| 46 | 3369 | 101 | 73.2 | 1.759 | 236 | 5926 |
| 47 | 3468 | 99 | 73.8 | 1.777 | 238 | 6164 |
| 48 | 3565 | 97 | 74.3 | 1.796 | 240 | 6404 |
| **49** | **3660** | **95** | **74.7** | **1.816** | **242** | **6646** |
| 50 | 3753 | 93 | 75.1 | 1.836 | 244 | 6890 |
| 51 | 3844 | 91 | 75.4 | 1.856 | 245 | 7135 |
| 52 | 3933 | 89 | 75.6 | 1.877 | 246 | 7381 |
| 53 | 4020 | 87 | 75.8 | 1.898 | 247 | 7628 |
| 54 | 4105 | 85 | 76.0 | 1.919 | 248 | 7876 |
| 55 | 4190 | 85 | 76.2 | 1.939 | 249 | 8125 |
| **56** | **4275** | **85** | **76.3** | **1.959** | **250** | **8375** |

## Performance objectives - notes

# Performance objectives - imperial

## AS HATCHED

| Age days | Weight for Age | Daily Gain (lb) | Average Daily Gain (lb) | Cumulative Feed Conversion | Daily Feed Consumption (lb) | Cumulative Feed Consumption (lb) |
|---|---|---|---|---|---|---|
| 0 | 0.093 | | | | | |
| 1 | 0.115 | 0.022 | | | | |
| 2 | 0.146 | 0.031 | | | | |
| 3 | 0.179 | 0.033 | | | | |
| 4 | 0.220 | 0.042 | | | | |
| 5 | 0.269 | 0.049 | | | | |
| 6 | 0.326 | 0.057 | | | | |
| **7** | **0.390** | **0.064** | **0.056** | **0.847** | | **0.331** |
| 8 | 0.459 | 0.068 | 0.057 | 0.865 | 0.066 | 0.397 |
| 9 | 0.534 | 0.075 | 0.059 | 0.888 | 0.077 | 0.474 |
| 10 | 0.615 | 0.082 | 0.062 | 0.914 | 0.088 | 0.562 |
| 11 | 0.705 | 0.090 | 0.064 | 0.938 | 0.099 | 0.661 |
| 12 | 0.802 | 0.097 | 0.067 | 0.962 | 0.110 | 0.772 |
| 13 | 0.904 | 0.101 | 0.070 | 0.988 | 0.121 | 0.893 |
| **14** | **1.012** | **0.108** | **0.072** | **1.013** | **0.132** | **1.025** |
| 15 | 1.127 | 0.115 | 0.075 | 1.039 | 0.146 | 1.171 |
| 16 | 1.250 | 0.123 | 0.078 | 1.063 | 0.159 | 1.329 |
| 17 | 1.380 | 0.130 | 0.081 | 1.088 | 0.172 | 1.501 |
| 18 | 1.517 | 0.137 | 0.084 | 1.112 | 0.185 | 1.687 |
| 19 | 1.660 | 0.143 | 0.087 | 1.135 | 0.198 | 1.885 |
| 20 | 1.810 | 0.150 | 0.091 | 1.158 | 0.212 | 2.097 |
| **21** | **1.964** | **0.154** | **0.094** | **1.182** | **0.225** | **2.321** |
| 22 | 2.125 | 0.161 | 0.097 | 1.205 | 0.240 | 2.562 |
| 23 | 2.291 | 0.165 | 0.100 | 1.230 | 0.256 | 2.818 |
| 24 | 2.458 | 0.168 | 0.102 | 1.257 | 0.271 | 3.089 |
| 25 | 2.630 | 0.172 | 0.105 | 1.283 | 0.287 | 3.375 |
| 26 | 2.804 | 0.174 | 0.108 | 1.311 | 0.302 | 3.677 |
| 27 | 2.983 | 0.179 | 0.110 | 1.339 | 0.317 | 3.995 |
| **28** | **3.166** | **0.183** | **0.113** | **1.367** | **0.333** | **4.328** |
| 29 | 3.353 | 0.187 | 0.116 | 1.394 | 0.348 | 4.676 |
| 30 | 3.545 | 0.192 | 0.118 | 1.422 | 0.364 | 5.040 |
| 31 | 3.741 | 0.196 | 0.121 | 1.448 | 0.379 | 5.419 |
| 32 | 3.942 | 0.201 | 0.123 | 1.475 | 0.395 | 5.814 |
| 33 | 4.145 | 0.203 | 0.126 | 1.502 | 0.410 | 6.224 |
| 34 | 4.350 | 0.205 | 0.128 | 1.529 | 0.425 | 6.649 |
| **35** | **4.557** | **0.207** | **0.130** | **1.556** | **0.441** | **7.090** |
| 36 | 4.766 | 0.209 | 0.132 | 1.581 | 0.445 | 7.535 |
| 37 | 4.976 | 0.209 | 0.135 | 1.604 | 0.448 | 7.983 |
| 38 | 5.185 | 0.209 | 0.136 | 1.627 | 0.452 | 8.435 |
| 39 | 5.395 | 0.209 | 0.138 | 1.648 | 0.454 | 8.889 |
| 40 | 5.604 | 0.209 | 0.140 | 1.668 | 0.459 | 9.348 |
| 41 | 5.814 | 0.209 | 0.142 | 1.687 | 0.461 | 9.808 |
| **42** | **6.023** | **0.209** | **0.143** | **1.705** | **0.463** | **10.271** |
| 43 | 6.230 | 0.207 | 0.145 | 1.724 | 0.467 | 10.739 |
| 44 | 6.435 | 0.205 | 0.146 | 1.742 | 0.472 | 11.211 |
| 45 | 6.638 | 0.203 | 0.148 | 1.761 | 0.476 | 11.687 |
| 46 | 6.839 | 0.201 | 0.149 | 1.779 | 0.481 | 12.167 |
| 47 | 7.037 | 0.198 | 0.150 | 1.798 | 0.485 | 12.652 |
| 48 | 7.233 | 0.196 | 0.151 | 1.817 | 0.489 | 13.142 |
| **49** | **7.427** | **0.194** | **0.152** | **1.836** | **0.494** | **13.636** |
| 50 | 7.619 | 0.192 | 0.152 | 1.855 | 0.496 | 14.132 |
| 51 | 7.809 | 0.190 | 0.153 | 1.874 | 0.498 | 14.630 |
| 52 | 7.996 | 0.187 | 0.154 | 1.892 | 0.498 | 15.128 |
| 53 | 8.181 | 0.185 | 0.154 | 1.910 | 0.500 | 15.629 |
| 54 | 8.364 | 0.183 | 0.155 | 1.928 | 0.500 | 16.129 |
| 55 | 8.545 | 0.181 | 0.155 | 1.946 | 0.503 | 16.632 |
| **56** | **8.726** | **0.181** | **0.156** | **1.964** | **0.503** | **17.134** |

## Performance objectives - imperial

### FEMALES

| Age days | Weight for Age | Daily Gain (lb) | Average Daily Gain (lb) | Cumulative Feed Conversion | Daily Feed Consumption (lb) | Cumulative Feed Consumption (lb) |
|---|---|---|---|---|---|---|
| 0 | 0.090 | | | | | |
| 1 | 0.112 | 0.022 | | | | |
| 2 | 0.143 | 0.031 | | | | |
| 3 | 0.176 | 0.033 | | | | |
| 4 | 0.218 | 0.042 | | | | |
| 5 | 0.267 | 0.049 | | | | |
| 6 | 0.322 | 0.055 | | | | |
| **7** | **0.386** | **0.064** | **0.055** | **0.876** | | **0.331** |
| 8 | 0.452 | 0.066 | 0.057 | 0.878 | 0.066 | 0.397 |
| 9 | 0.523 | 0.071 | 0.058 | 0.907 | 0.077 | 0.474 |
| 10 | 0.595 | 0.073 | 0.060 | 0.944 | 0.088 | 0.562 |
| 11 | 0.681 | 0.086 | 0.062 | 0.968 | 0.097 | 0.659 |
| 12 | 0.774 | 0.093 | 0.064 | 0.989 | 0.106 | 0.765 |
| 13 | 0.873 | 0.099 | 0.067 | 1.008 | 0.115 | 0.880 |
| **14** | **0.977** | **0.104** | **0.070** | **1.029** | **0.126** | **1.005** |
| 15 | 1.083 | 0.106 | 0.072 | 1.055 | 0.137 | 1.142 |
| 16 | 1.195 | 0.112 | 0.075 | 1.079 | 0.148 | 1.290 |
| 17 | 1.312 | 0.117 | 0.077 | 1.104 | 0.159 | 1.449 |
| 18 | 1.438 | 0.126 | 0.080 | 1.126 | 0.170 | 1.618 |
| 19 | 1.572 | 0.135 | 0.083 | 1.146 | 0.183 | 1.801 |
| 20 | 1.715 | 0.143 | 0.086 | 1.165 | 0.196 | 1.998 |
| **21** | **1.861** | **0.146** | **0.089** | **1.186** | **0.209** | **2.207** |
| 22 | 2.009 | 0.148 | 0.091 | 1.210 | 0.223 | 2.430 |
| 23 | 2.159 | 0.150 | 0.094 | 1.235 | 0.236 | 2.666 |
| 24 | 2.311 | 0.152 | 0.096 | 1.261 | 0.249 | 2.915 |
| 25 | 2.465 | 0.154 | 0.099 | 1.289 | 0.262 | 3.177 |
| 26 | 2.624 | 0.159 | 0.101 | 1.317 | 0.278 | 3.455 |
| 27 | 2.787 | 0.163 | 0.103 | 1.345 | 0.293 | 3.749 |
| **28** | **2.957** | **0.170** | **0.106** | **1.372** | **0.309** | **4.057** |
| 29 | 3.129 | 0.172 | 0.108 | 1.400 | 0.322 | 4.379 |
| 30 | 3.303 | 0.174 | 0.110 | 1.427 | 0.335 | 4.714 |
| 31 | 3.479 | 0.176 | 0.112 | 1.455 | 0.348 | 5.063 |
| 32 | 3.660 | 0.181 | 0.114 | 1.482 | 0.362 | 5.424 |
| 33 | 3.846 | 0.185 | 0.117 | 1.509 | 0.377 | 5.801 |
| 34 | 4.033 | 0.187 | 0.119 | 1.536 | 0.392 | 6.194 |
| **35** | **4.220** | **0.187** | **0.121** | **1.564** | **0.408** | **6.602** |
| 36 | 4.408 | 0.187 | 0.122 | 1.591 | 0.410 | 7.012 |
| 37 | 4.595 | 0.187 | 0.124 | 1.616 | 0.412 | 7.424 |
| 38 | 4.783 | 0.187 | 0.126 | 1.639 | 0.415 | 7.839 |
| 39 | 4.970 | 0.187 | 0.127 | 1.661 | 0.417 | 8.256 |
| 40 | 5.157 | 0.187 | 0.129 | 1.682 | 0.419 | 8.674 |
| 41 | 5.347 | 0.190 | 0.130 | 1.701 | 0.421 | 9.096 |
| **42** | **5.537** | **0.190** | **0.132** | **1.719** | **0.423** | **9.519** |
| 43 | 5.724 | 0.187 | 0.133 | 1.738 | 0.428 | 9.947 |
| 44 | 5.907 | 0.183 | 0.134 | 1.757 | 0.432 | 10.379 |
| 45 | 6.086 | 0.179 | 0.135 | 1.777 | 0.437 | 10.816 |
| 46 | 6.264 | 0.179 | 0.136 | 1.797 | 0.441 | 11.257 |
| 47 | 6.443 | 0.179 | 0.137 | 1.816 | 0.445 | 11.702 |
| 48 | 6.622 | 0.179 | 0.138 | 1.835 | 0.450 | 12.152 |
| **49** | **6.800** | **0.179** | **0.139** | **1.854** | **0.454** | **12.606** |
| 50 | 6.979 | 0.179 | 0.140 | 1.871 | 0.454 | 13.060 |
| 51 | 7.157 | 0.179 | 0.140 | 1.888 | 0.454 | 13.514 |
| 52 | 7.332 | 0.174 | 0.141 | 1.905 | 0.454 | 13.969 |
| 53 | 7.506 | 0.174 | 0.142 | 1.922 | 0.454 | 14.423 |
| 54 | 7.680 | 0.174 | 0.142 | 1.937 | 0.454 | 14.877 |
| 55 | 7.854 | 0.174 | 0.143 | 1.952 | 0.454 | 15.331 |
| **56** | **8.028** | **0.174** | **0.143** | **1.966** | **0.454** | **15.786** |

# Performance objectives - imperial

## MALES

| Age days | Weight for Age | Daily Gain (lb) | Average Daily Gain (lb) | Cumulative Feed Conversion | Daily Feed Consumption (lb) | Cumulative Feed Consumption (lb) |
|---|---|---|---|---|---|---|
| 0 | 0.095 | | | | | |
| 1 | 0.117 | 0.022 | | | | |
| 2 | 0.148 | 0.031 | | | | |
| 3 | 0.181 | 0.033 | | | | |
| 4 | 0.223 | 0.042 | | | | |
| 5 | 0.271 | 0.049 | | | | |
| 6 | 0.331 | 0.060 | | | | |
| **7** | **0.395** | **0.064** | **0.056** | **0.844** | | **0.333** |
| 8 | 0.465 | 0.071 | 0.058 | 0.858 | 0.066 | 0.399 |
| 9 | 0.545 | 0.079 | 0.061 | 0.874 | 0.077 | 0.476 |
| 10 | 0.635 | 0.090 | 0.064 | 0.889 | 0.088 | 0.564 |
| 11 | 0.730 | 0.095 | 0.066 | 0.912 | 0.101 | 0.666 |
| 12 | 0.831 | 0.101 | 0.069 | 0.939 | 0.115 | 0.781 |
| 13 | 0.935 | 0.104 | 0.072 | 0.972 | 0.128 | 0.908 |
| **14** | **1.047** | **0.112** | **0.075** | **1.000** | **0.139** | **1.047** |
| 15 | 1.171 | 0.123 | 0.078 | 1.026 | 0.154 | 1.202 |
| 16 | 1.305 | 0.135 | 0.082 | 1.051 | 0.170 | 1.372 |
| 17 | 1.449 | 0.143 | 0.085 | 1.075 | 0.185 | 1.557 |
| 18 | 1.596 | 0.148 | 0.089 | 1.101 | 0.201 | 1.757 |
| 19 | 1.749 | 0.152 | 0.092 | 1.127 | 0.214 | 1.971 |
| 20 | 1.905 | 0.157 | 0.095 | 1.154 | 0.227 | 2.198 |
| **21** | **2.068** | **0.163** | **0.098** | **1.179** | **0.240** | **2.439** |
| 22 | 2.236 | 0.168 | 0.102 | 1.206 | 0.258 | 2.697 |
| 23 | 2.410 | 0.174 | 0.105 | 1.231 | 0.271 | 2.968 |
| 24 | 2.591 | 0.181 | 0.108 | 1.259 | 0.293 | 3.261 |
| 25 | 2.778 | 0.187 | 0.111 | 1.286 | 0.311 | 3.572 |
| 26 | 2.972 | 0.194 | 0.114 | 1.312 | 0.326 | 3.898 |
| 27 | 3.173 | 0.201 | 0.118 | 1.336 | 0.342 | 4.240 |
| **28** | **3.376** | **0.203** | **0.121** | **1.362** | **0.357** | **4.597** |
| 29 | 3.585 | 0.209 | 0.124 | 1.387 | 0.375 | 4.972 |
| 30 | 3.797 | 0.212 | 0.127 | 1.413 | 0.392 | 5.365 |
| 31 | 4.011 | 0.214 | 0.129 | 1.439 | 0.406 | 5.770 |
| 32 | 4.227 | 0.216 | 0.132 | 1.466 | 0.428 | 6.198 |
| 33 | 4.445 | 0.218 | 0.135 | 1.494 | 0.443 | 6.641 |
| 34 | 4.666 | 0.221 | 0.137 | 1.522 | 0.459 | 7.100 |
| **35** | **4.888** | **0.223** | **0.140** | **1.549** | **0.474** | **7.574** |
| 36 | 5.113 | 0.225 | 0.142 | 1.575 | 0.478 | 8.053 |
| 37 | 5.341 | 0.227 | 0.144 | 1.598 | 0.483 | 8.536 |
| 38 | 5.570 | 0.229 | 0.147 | 1.620 | 0.487 | 9.023 |
| 39 | 5.801 | 0.232 | 0.149 | 1.640 | 0.492 | 9.515 |
| 40 | 6.035 | 0.234 | 0.151 | 1.659 | 0.496 | 10.011 |
| 41 | 6.271 | 0.236 | 0.153 | 1.676 | 0.498 | 10.509 |
| **42** | **6.511** | **0.240** | **0.155** | **1.691** | **0.503** | **11.012** |
| 43 | 6.747 | 0.236 | 0.157 | 1.707 | 0.507 | 11.519 |
| 44 | 6.979 | 0.232 | 0.159 | 1.724 | 0.512 | 12.030 |
| 45 | 7.206 | 0.227 | 0.160 | 1.741 | 0.516 | 12.546 |
| 46 | 7.429 | 0.223 | 0.161 | 1.759 | 0.520 | 13.067 |
| 47 | 7.647 | 0.218 | 0.163 | 1.777 | 0.525 | 13.592 |
| 48 | 7.861 | 0.214 | 0.164 | 1.796 | 0.529 | 14.121 |
| **49** | **8.070** | **0.209** | **0.165** | **1.816** | **0.534** | **14.654** |
| 50 | 8.275 | 0.205 | 0.166 | 1.836 | 0.538 | 15.192 |
| 51 | 8.476 | 0.201 | 0.166 | 1.856 | 0.540 | 15.733 |
| 52 | 8.672 | 0.196 | 0.167 | 1.877 | 0.542 | 16.275 |
| 53 | 8.864 | 0.192 | 0.167 | 1.898 | 0.545 | 16.820 |
| 54 | 9.052 | 0.187 | 0.168 | 1.919 | 0.547 | 17.367 |
| 55 | 9.239 | 0.187 | 0.168 | 1.939 | 0.549 | 17.916 |
| **56** | **9.426** | **0.187** | **0.168** | **1.959** | **0.551** | **18.467** |

# Broiler Nutrition

## Recommended minimum specifications

| | | Starter | Grower | Finisher 1 | Finisher 2* |
|---|---|---|---|---|---|
| **FEEDING AMOUNT/bird** | | **250 g<br>0.55 lb** | **1000 g<br>2.20 lb** | | |
| **FEEDING PERIOD days** | | **0 - 10** | **11 - 22** | **23 - 42** | **43 +** |
| **FEED STRUCTURE** | | **Crumb** | **Pellet** | **Pellet** | **Pellet** |
| **Crude Protein** | % | 21-22 | 19-20 | 18-19 | 17-18 |
| **Metabolizable energy (AMEn†)** | MJ/kg<br>Kcal/kg<br>Kcal/lb | 12.70<br>3035<br>1380 | 13.00<br>3108<br>1410 | 13.30<br>3180<br>1442 | 13.40<br>3203<br>1453 |
| **Lysine** | % | 1.32 | 1.19 | 1.05 | 1.00 |
| **Digestible Lysine** | % | 1.18 | 1.05 | 0.95 | 0.90 |
| **Methionine** | % | 0.50 | 0.48 | 0.43 | 0.41 |
| **Digestible Methionine** | % | 0.45 | 0.42 | 0.39 | 0.37 |
| **Met + Cys** | % | 0.98 | 0.89 | 0.82 | 0.78 |
| **Digestible Met + Cys** | % | 0.88 | 0.80 | 0.74 | 0.70 |
| **Tryptophan** | % | 0.20 | 0.19 | 0.19 | 0.18 |
| **Digestible Tryptophan** | % | 0.18 | 0.17 | 0.17 | 0.16 |
| **Threonine** | % | 0.86 | 0.78 | 0.71 | 0.68 |
| **Digestible Threonine** | % | 0.77 | 0.69 | 0.65 | 0.61 |
| **Arginine** | % | 1.38 | 1.25 | 1.13 | 1.08 |
| **Digestible Arginine** | % | 1.24 | 1.10 | 1.03 | 0.97 |
| **Valine** | % | 1.00 | 0.91 | 0.81 | 0.77 |
| **Digestible Valine** | % | 0.89 | 0.81 | 0.73 | 0.69 |
| **Calcium** | % | 0.90 | 0.84 | 0.76 | 0.76 |
| **Available Phosphorus** | % | 0.45 | 0.42 | 0.38 | 0.38 |
| **Sodium** | % | 0.16-0.23 | 0.16-0.23 | 0.15-0.23 | 0.15-0.23 |
| **Chloride** | % | 0.17-0.35 | 0.16-0.35 | 0.15-0.35 | 0.15-0.35 |
| **Potassium** | % | 0.60-0.95 | 0.60-0.85 | 0.60-0.80 | 0.60-0.80 |
| **Linoleic Acid** | % | 1.00 | 1.00 | 1.00 | 1.00 |

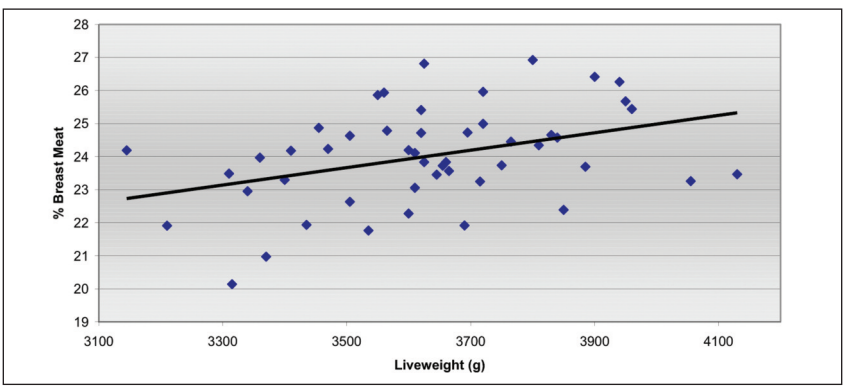
† The AMEn values are based on the WPSA European table of energy values for Poultry Feedstuffs 3rd Edition 1989.
* Should withdrawal feed be required use same finisher specification.

# Yield Performance

Meat yield is dependent on many factors, but those that have the most influence are weight, age and nutrition.

**Weight**

- Carcass and breast meat yield increase as a function of liveweight at any given age.




Percent breast meat yield for birds from a single flock of males processed at 50 days.

**Age**

- Carcass and breast meat yield increase as a function of age.
- Older birds processed at the same weight will often yield more than their younger counterparts.

| Sex | Age | Weight g (lb) | % Eviscerated Carcass |
|---|---|---|---|
| A/H | 46 | 2826 (6.231) | 74.6 |
| A/H | 43 | 2830 (6.240) | 74.1 |
| **Difference** | **3** | **-4** | **0.50** |

**Feed**

- Carcass composition is affected by nutrition.
- Rations of varying nutrient density will affect yield in different ways.
- As protein is increased there is a corresponding increase in breast meat yield as a percent of live weight.

# Yield Performance

## Predicted carcass yields at given weights

### AS HATCHED

| Weight g | Weight lb | % Carcass | % Boneless Breast | % Whole Thigh | % Whole Drum Stick | % Wing |
|---|---|---|---|---|---|---|
| 1600 | 3.528 | 71.9 | 20.70 | 13.78 | 8.77 | 7.78 |
| 1800 | 3.969 | 72.5 | 21.25 | 13.94 | 8.79 | 7.75 |
| 2000 | 4.410 | 73.1 | 22.12 | 14.08 | 8.81 | 7.72 |
| 2200 | 4.851 | 73.8 | 22.74 | 14.16 | 8.83 | 7.69 |
| 2400 | 5.292 | 74.4 | 23.31 | 14.28 | 8.85 | 7.66 |
| 2600 | 5.733 | 75.1 | 23.83 | 14.40 | 8.87 | 7.63 |
| 2800 | 6.174 | 75.9 | 24.26 | 14.50 | 8.89 | 7.60 |
| 3000 | 6.615 | 76.4 | 24.56 | 14.58 | 8.91 | 7.57 |
| 3200 | 7.056 | 77.0 | 25.11 | 14.66 | 8.93 | 7.54 |

### FEMALES

| Weight g | Weight lb | % Carcass | % Boneless Breast | % Whole Thigh | % Whole Drum Stick | % Wing |
|---|---|---|---|---|---|---|
| 1600 | 3.528 | 72.0 | 21.53 | 14.02 | 8.52 | 7.84 |
| 1800 | 3.969 | 72.6 | 21.65 | 14.20 | 8.54 | 7.81 |
| 2000 | 4.410 | 73.2 | 22.40 | 14.36 | 8.56 | 7.78 |
| 2200 | 4.851 | 73.7 | 22.98 | 14.40 | 8.58 | 7.75 |
| 2400 | 5.292 | 74.5 | 23.46 | 14.52 | 8.60 | 7.72 |
| 2600 | 5.733 | 75.6 | 23.93 | 14.66 | 8.62 | 7.69 |
| 2800 | 6.174 | 75.8 | 24.31 | 14.76 | 8.64 | 7.66 |

### MALES

| Weight g | Weight lb | % Carcass | % Boneless Breast | % Whole Thigh | % Whole Drum Stick | % Wing |
|---|---|---|---|---|---|---|
| 1600 | 3.528 | 71.8 | 20.35 | 13.54 | 9.02 | 7.71 |
| 1800 | 3.969 | 72.4 | 20.97 | 13.67 | 9.04 | 7.68 |
| 2000 | 4.410 | 73.0 | 21.84 | 13.79 | 9.06 | 7.65 |
| 2200 | 4.851 | 73.7 | 22.50 | 13.91 | 9.08 | 7.62 |
| 2400 | 5.292 | 74.3 | 23.15 | 14.04 | 9.10 | 7.58 |
| 2600 | 5.733 | 75.0 | 23.73 | 14.14 | 9.12 | 7.55 |
| 2800 | 6.174 | 75.6 | 24.21 | 14.24 | 9.14 | 7.52 |
| 3000 | 6.615 | 76.3 | 24.46 | 14.36 | 9.16 | 7.49 |
| 3200 | 7.056 | 76.9 | 24.95 | 14.48 | 9.18 | 7.46 |
| 3400 | 7.497 | 77.5 | 25.53 | 14.59 | 9.20 | 7.43 |
| 3600 | 7.938 | 78.2 | 26.10 | 14.71 | 9.22 | 7.40 |

- Eviscerated carcass is calculated with feet and shanks removed from the hock joint.
- % Boneless breast is as a percentage of live weight.

# Broiler Nutrition

## Balanced protein total amino acid profiles

| Amino Acid | Starter 0-10 days | Grower 11-22 days | Finisher 1 23-42 days | Finisher 2 43- days |
|---|---|---|---|---|
| **Lysine*** | 100 | 100 | 100 | 100 |
| **Methionine** | 38 | 40 | 41 | 41 |
| **Methionine + Cystine** | 74 | 76 | 78 | 78 |
| **Tryptophan** | 16 | 16 | 18 | 18 |
| **Threonine** | 65 | 66 | 68 | 68 |
| **Arginine** | 105 | 105 | 108 | 108 |
| **Valine** | 75 | 76 | 77 | 77 |

* In the profile Lysine is always the reference amino acid, and is shown at 100%.

## Supplementary levels of vitamins and trace elements (per tonne)

| | | Starter | Grower | Finisher 1 and 2 |
|---|---|---|---|---|
| **Vitamin A** | (MIU) | 13 | 10 | 10 |
| **Vitamin D3** | (MIU) | 5 | 5 | 5 |
| **Vitamin E** | (KIU) | 80 | 50 | 50 |
| **Vitamin K** | (g) | 3 | 3 | 3 |
| **Vitamin B1 (thiamine)** | (g) | 3 | 2 | 2 |
| **Vitamin B2 (riboflavin)** | (g) | 9 | 8 | 6 |
| **Vitamin B6 (pyridoxine)** | (g) | 4 | 3 | 3 |
| **Vitamin B12** | (mg) | 20 | 15 | 15 |
| **Biotin (Maize Diets)** | (mg) | 150 | 120 | 120 |
| **Biotin (Wheat Diets)** | (mg) | 200 | 180 | 180 |
| **Choline*** | (mg) | 500 | 400 | 350 |
| **Folic Acid** | (g) | 2 | 2 | 1.5 |
| **Nicotinic Acid** | (g) | 60 | 50 | 50 |
| **Pantothenic Acid** | (g) | 15 | 12 | 10 |
| **Manganese** | (g) | 100 | 100 | 100 |
| **Zinc** | (g) | 100 | 100 | 100 |
| **Iron** | (g) | 40 | 40 | 40 |
| **Copper** | (g) | 15 | 15 | 15 |
| **Iodine** | (g) | 1 | 1 | 1 |
| **Selenium** | (g) | 0.35 | 0.35 | 0.35 |

* Preferably Choline is added directly into the mixer rather than via a premix because of its hygroscopic nature.

Vitamin and trace mineral levels may vary depending on the source and supplier. The numbers above refers to e.g. usage of inorganic minerals and a vitamin D3 source.

MIU = million international units; KIU = thousand international units; g = grams; mg = milligrams

Supplementary levels of trace elements should always be reviewed to ensure total levels do not exceed those set in local legislation (e.g. EU 1334/2003).

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L-2114-06 EN
October 1, 2013