



Performance & Nutrition Supplement

Cobb700 Broiler

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Introduction

This supplement presents broiler performance and yield targets for your Cobb700 broilers, together with recommendations on nutritional specifications designed to help achieve these targets.

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

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. (Available at: <https://www.cobb-vantress.com/resource/managementguides>)

Today's broiler farmers not only want to raise broilers that grow efficiently, but also want broilers that have good livability and good animal welfare characteristics. Cobb's dedication for broiler genetics has generated incredible advances in economic traits related to feed efficiency, growth and muscle quality, and has also produced broiler genetics with improved cardiovascular function, better skeletal strength, and more uniform body size.



COBB700 BROILER PERFORMANCE OBJECTIVES

C700 Broiler Performance Objectives (Imperial)						
AS HATCHED						
Age (days)	Weight (lb)	Daily Gain (lb)	Average Daily Gain (lb)	Cumulative Feed Conversion	Daily Feed Consumption (lb)	Cumulative Feed Consumption (lb)
0	0.09					
1	0.12	0.03		0.326	0.04	0.04
2	0.16	0.03		0.525	0.04	0.08
3	0.19	0.04		0.660	0.05	0.13
4	0.24	0.04		0.752	0.05	0.18
5	0.29	0.05		0.814	0.06	0.23
6	0.34	0.06		0.857	0.06	0.29
7	0.40	0.06	0.06	0.883	0.06	0.36
8	0.47	0.07	0.06	0.904	0.07	0.43
9	0.55	0.08	0.06	0.924	0.08	0.51
10	0.63	0.08	0.06	0.945	0.09	0.60
11	0.72	0.09	0.07	0.966	0.10	0.69
12	0.82	0.10	0.07	0.986	0.11	0.80
13	0.92	0.10	0.07	1.007	0.12	0.93
14	1.03	0.11	0.07	1.028	0.13	1.06
15	1.15	0.12	0.08	1.049	0.15	1.21
16	1.28	0.13	0.08	1.070	0.16	1.37
17	1.41	0.13	0.08	1.091	0.17	1.54
18	1.55	0.14	0.09	1.111	0.19	1.73
19	1.70	0.15	0.09	1.132	0.20	1.93
20	1.86	0.16	0.09	1.153	0.21	2.14
21	2.02	0.16	0.10	1.174	0.23	2.37
22	2.19	0.17	0.10	1.195	0.24	2.61
23	2.36	0.17	0.10	1.216	0.26	2.87
24	2.54	0.18	0.11	1.236	0.27	3.14
25	2.73	0.18	0.11	1.257	0.28	3.43
26	2.92	0.19	0.11	1.278	0.30	3.73
27	3.11	0.19	0.12	1.298	0.31	4.04
28	3.31	0.20	0.12	1.319	0.32	4.36
29	3.51	0.20	0.12	1.339	0.34	4.70
30	3.71	0.20	0.12	1.360	0.35	5.05
31	3.92	0.21	0.13	1.380	0.36	5.41
32	4.13	0.21	0.13	1.400	0.37	5.78
33	4.34	0.21	0.13	1.420	0.38	6.17

C700 Broiler Performance Objectives (Imperial)						
AS HATCHED						
Age (days)	Weight (lb)	Daily Gain (lb)	Average Daily Gain (lb)	Cumulative Feed Conversion	Daily Feed Consumption (lb)	Cumulative Feed Consumption (lb)
34	4.55	0.21	0.13	1.440	0.39	6.56
35	4.77	0.21	0.14	1.460	0.40	6.96
36	4.98	0.21	0.14	1.480	0.41	7.37
37	5.20	0.22	0.14	1.500	0.42	7.80
38	5.41	0.22	0.14	1.519	0.43	8.23
39	5.63	0.22	0.14	1.539	0.44	8.67
40	5.85	0.22	0.15	1.558	0.45	9.11
41	6.06	0.22	0.15	1.578	0.45	9.56
42	6.28	0.21	0.15	1.597	0.46	10.02
43	6.49	0.21	0.15	1.616	0.46	10.49
44	6.70	0.21	0.15	1.635	0.47	10.96
45	6.91	0.21	0.15	1.653	0.47	11.43
46	7.12	0.21	0.15	1.672	0.48	11.91
47	7.33	0.21	0.16	1.690	0.48	12.39
48	7.53	0.20	0.16	1.709	0.48	12.87
49	7.73	0.20	0.16	1.727	0.48	13.36
50	7.93	0.20	0.16	1.745	0.49	13.84
51	8.13	0.20	0.16	1.762	0.49	14.33
52	8.32	0.19	0.16	1.780	0.49	14.82
53	8.51	0.19	0.16	1.798	0.49	15.31
54	8.70	0.19	0.16	1.815	0.49	15.79
55	8.89	0.18	0.16	1.832	0.49	16.28
56	9.07	0.18	0.16	1.849	0.49	16.77
57	9.24	0.18	0.16	1.866	0.48	17.25
58	9.42	0.17	0.16	1.883	0.48	17.73
59	9.59	0.17	0.16	1.899	0.48	18.21
60	9.76	0.17	0.16	1.916	0.48	18.69
61	9.92	0.16	0.16	1.932	0.47	19.16
62	10.08	0.16	0.16	1.948	0.47	19.63
63	10.24	0.16	0.16	1.964	0.47	20.10

COBB700 BROILER PERFORMANCE OBJECTIVES

C700 Broiler Performance Objectives (Metric)						
AS HATCHED						
Age (days)	Weight (g)	Daily Gain (g)	Average Daily Gain (g)	Cumulative Feed Conversion	Daily Feed Consumption (g)	Cumulative Feed Consumption (g)
0	42					
1	55	13.2		0.326	18	18
2	70	15.2		0.525	19	37
3	88	17.5		0.660	21	58
4	108	19.8		0.752	23	81
5	130	22.4		0.814	25	106
6	155	25.1		0.857	27	133
7	183	28.0	26.2	0.883	29	162
8	214	31.0	26.8	0.904	32	194
9	248	34.1	27.6	0.924	36	230
10	286	37.3	28.6	0.945	40	270
11	326	40.6	29.7	0.966	45	315
12	370	43.9	30.8	0.986	50	365
13	417	47.3	32.1	1.007	55	420
14	468	50.8	33.4	1.028	61	481
15	522	54.2	34.8	1.049	67	548
16	580	57.6	36.2	1.070	72	620
17	641	60.9	37.7	1.091	79	699
18	705	64.2	39.2	1.111	85	784
19	772	67.4	40.6	1.132	91	874
20	843	70.4	42.1	1.153	97	972
21	916	73.4	43.6	1.174	104	1076
22	992	76.2	45.1	1.195	110	1186
23	1071	78.9	46.6	1.216	117	1302
24	1153	81.4	48.0	1.236	123	1425
25	1237	83.8	49.5	1.257	129	1554
26	1323	86.0	50.9	1.278	135	1690
27	1410	87.9	52.2	1.298	141	1831
28	1500	89.7	53.6	1.319	147	1978
29	1592	91.3	54.9	1.339	153	2131
30	1684	92.8	56.1	1.360	159	2290
31	1778	94.0	57.4	1.380	164	2454
32	1873	95.0	58.5	1.400	169	2623
33	1969	95.8	59.7	1.420	174	2797

C700 Broiler Performance Objectives (Metric)						
AS HATCHED						
Age (days)	Weight (g)	Daily Gain (g)	Average Daily Gain (g)	Cumulative Feed Conversion	Daily Feed Consumption (g)	Cumulative Feed Consumption (g)
34	2065	96.4	60.7	1.440	178	2975
35	2163	97.0	61.8	1.460	183	3158
36	2260	97.4	62.8	1.480	187	3345
37	2358	98.0	63.7	1.500	191	3537
38	2456	98.1	64.6	1.519	195	3732
39	2554	98.2	65.5	1.539	199	3931
40	2652	98.0	66.3	1.558	202	4133
41	2750	97.8	67.1	1.578	205	4338
42	2847	97.4	67.8	1.597	208	4547
43	2944	96.9	68.5	1.616	211	4757
44	3041	96.2	69.1	1.635	213	4970
45	3136	95.5	69.7	1.653	215	5185
46	3231	94.6	70.2	1.672	216	5401
47	3324	93.7	70.7	1.690	218	5619
48	3417	92.6	71.2	1.709	219	5838
49	3509	91.5	71.6	1.727	220	6058
50	3599	90.3	72.0	1.745	221	6279
51	3688	89.1	72.3	1.762	221	6500
52	3776	87.8	72.6	1.780	221	6721
53	3862	86.4	72.9	1.798	221	6943
54	3947	85.0	73.1	1.815	221	7164
55	4031	83.5	73.3	1.832	221	7385
56	4113	82.0	73.4	1.849	220	7605
57	4193	80.5	73.6	1.866	220	7824
58	4272	78.9	73.7	1.883	219	8043
59	4349	77.4	73.7	1.899	218	8261
60	4425	75.8	73.8	1.916	216	8477
61	4499	74.2	73.8	1.932	215	8692
62	4572	72.6	73.7	1.948	214	8905
63	4643	71.0	73.7	1.964	212	9117

C700 Broiler Nutrient Recommendations						
	Unit	Starter	Grower	Finisher 1	Finisher 2	Finisher 3*
Feeding Amount/bird		1.0 lb 481 g	3.0 lb 1350 g	4.0 lb 1901 g	6.0 lb 2768 g	
Feeding Period (days)		0 - 14	15 - 27	28 - 38	39 - 51	> 52
Feed Structure		Crumble	Pellet	Pellet	Pellet	Pellet
Crude Protein	%	21	20	19	18	17
Metabolize energy (AMEn ^{**})	MJ/kg	12.45	12.69	13.10	13.24	13.38
	Kcal/kg	2,977	3,032	3,131	3,164	3,197
	Kcal/lb	1,350	1,375	1,420	1,435	1,450
Digestible Lysine	%	1.26	1.16	1.08	1.00	0.94
Digestible Methionine	%	0.50	0.46	0.43	0.42	0.40
Digestible Met + Cys	%	0.94	0.87	0.83	0.78	0.74
Digestible Tryptophan	%	0.21	0.19	0.17	0.17	0.17
Digestible Threonine	%	0.86	0.79	0.73	0.69	0.65
Digestible Arginine	%	1.32	1.22	1.13	1.05	0.99
Digestible Valine	%	0.93	0.87	0.83	0.78	0.73
Digestible Isoleucine	%	0.83	0.78	0.72	0.68	0.64
Calcium	%	0.94	0.84	0.74	0.72	0.70
Available Phosphorus	%	0.47	0.42	0.37	0.36	0.35
Sodium	%	0.15 - 0.24	0.15 - 0.24	0.15 - 0.24	0.15 - 0.24	0.15 - 0.24
Chloride	%	0.15 - 0.28	0.15 - 0.28	0.15 - 0.28	0.15 - 0.28	0.15 - 0.28
Potassium	%	0.60	0.60	0.60	0.60	0.60
Linoleic Acid	%	1.00	1.00	1.00	1.00	1.00

* Should Withdrawal feed be required, use same finisher specification.

** Energy system is based on the Apparent Metabolizable Energy corrected by Nitrogen (AMEn).

The amino acids values are based on Standardized Ileal Digestibility (SID) assays.

Supplementary Levels of Vitamins and Trace Minerals (Per Tonne)				
	Unit	Starter	Grower	Finisher*
Vitamin A	KIU	11,500	10,000	10,000
Vitamin D3	KIU	5,000	5,000	5,000
Vitamin E	KIU	80	70	70
Vitamin K	g	3.0	3.0	3.0
Thiamine (B1)	g	3.0	2.0	2.0
Riboflavin (B2)	g	9.0	8.0	7.0
Niacin	g	60	50	50
Pantothenic acid	g	17	15	13
Pyridoxine (B6)	g	4	3	3
Biotin (corn diets)	g	0.25	0.20	0.15
Biotin (wheat diets)	g	0.31	0.26	0.21
Folic acid	g	2.0	2.0	1.5
Vitamin B12	g	0.020	0.015	0.015
Choline**	g	800	650	500
Manganese	g	100	100	100
Zinc	g	100	100	100
Iron	g	40	40	40
Copper	g	15	15	15
Iodine	g	1.0	1.0	1.0
Selenium	g	0.3	0.3	0.3

Vitamin and trace minerals may vary depending on the source and supplier.

The numbers above refer to e.g. usage of inorganic minerals and vitamin D₃ source.

Supplementary levels of trace minerals should always be reviewed to ensure total levels. Do not exceed those set in local legislation.

KIU = Thousand international units

g = grams

*** All finisher feeds.**

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

Amino Acid	Balanced Digestible Amino Acid Ratios				
	Starter	Grower	Finisher 1	Finisher 2	Finisher 3*
Lysine**	100%	100%	100%	100%	100%
Methionine	40%	40%	40%	42%	43%
M + C	75%	75%	77%	78%	79%
Tryptophan	16%	16%	16%	17%	18%
Threonine	68%	68%	68%	69%	69%
Arginine	105%	105%	105%	105%	105%
Valine	74%	75%	77%	78%	78%
Isoleucine	66%	67%	67%	68%	68%

* Should withdrawal feed be required, use same finisher specification.

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

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 live weight at any given age.

Age

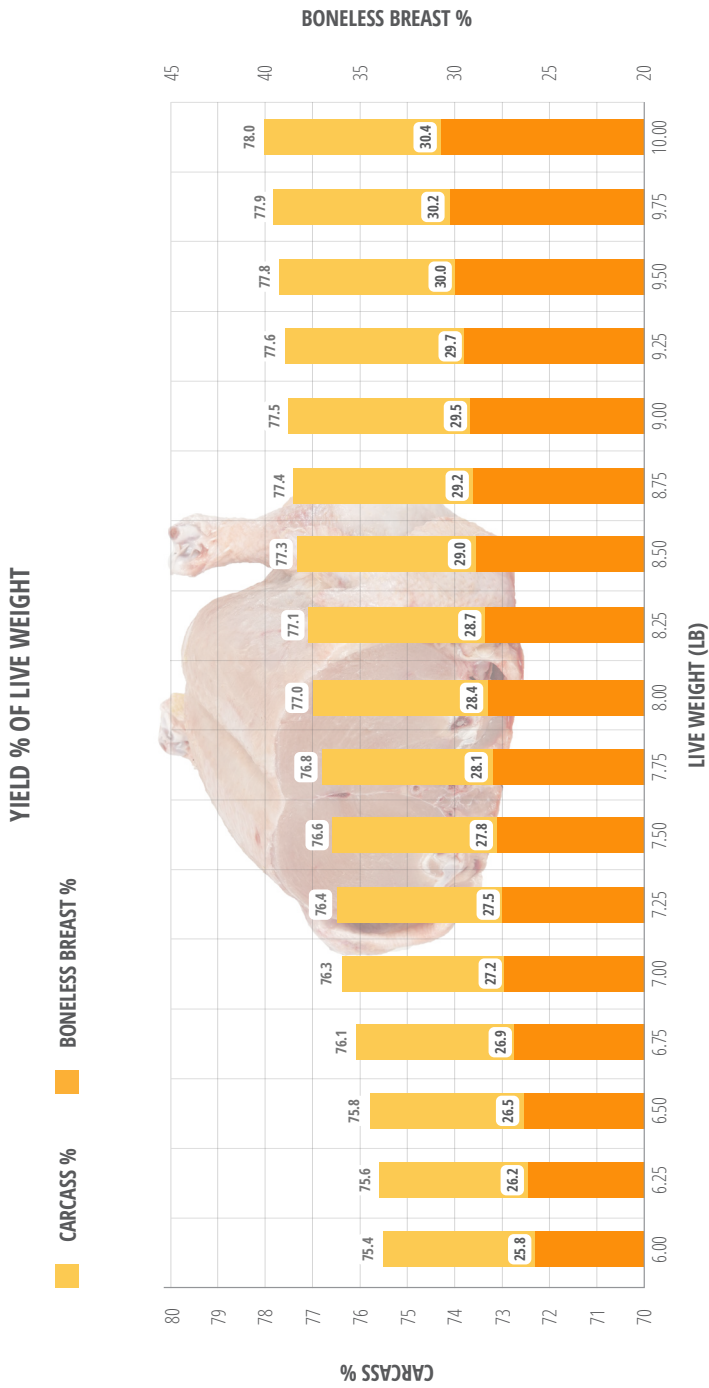
- ✓ Carcass and breast meat yield increase as a function of age.
- ✓ Older birds processed at the same weight as their younger counterparts will often yield more.

Feed, Yield, and Economics

- ✓ Carcass composition is affected by nutrition.
- ✓ Rations of varying nutrient density will affect yield in different ways.
- ✓ The exact overall levels of amino acids should be determined by ingredient prices and finished product values (from the processing plant).
- ✓ Cobb Technical Service will gladly assist customers to match specific economic priorities with formulation; however, the recommendations in this supplement represent very sound overall baseline levels.

Predicted Yields at Given Weights (% of Live Weight) AS HATCHED						
Live Weight		Carcass	Boneless	Thigh	Drum Stick	Wing
lb	g	%	Breast %	%	%	%
6.00	2722	75.39	25.81	13.32	9.10	7.16
6.25	2835	75.63	26.18	13.37	9.13	7.17
6.50	2948	75.85	26.53	13.41	9.17	7.19
6.75	3062	76.06	26.87	13.46	9.21	7.21
7.00	3175	76.26	27.20	13.50	9.24	7.22
7.25	3289	76.44	27.52	13.54	9.27	7.24
7.50	3402	76.62	27.82	13.58	9.30	7.25
7.75	3515	76.79	28.12	13.61	9.33	7.27
8.00	3629	76.96	28.41	13.65	9.36	7.28
8.25	3742	77.11	28.69	13.69	9.39	7.29
8.50	3856	77.25	28.96	13.72	9.42	7.30
8.75	3969	77.39	29.22	13.75	9.45	7.32
9.00	4082	77.52	29.47	13.78	9.47	7.33
9.25	4196	77.65	29.72	13.82	9.50	7.34
9.50	4309	77.77	29.96	13.85	9.52	7.35
9.75	4423	77.88	30.20	13.88	9.55	7.36
10.00	4536	77.98	30.42	13.90	9.57	7.37

- ✓ All yield values are dry yield (before chiller) based on percentage of live weight.
- ✓ Carcass refers to the eviscerated bird with feet removed at the hock joint.
- ✓ Boneless breast meat is calculated without skin and bone.
- ✓ Thigh, drumstick and wing are calculated with skin and bone.



All yield values are dry yield (before chiller) based on percentage of live weight.



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