Breeder Management Supplement

Female

breeder

Cobb*700*™

cobb-vantress.com

Cobb 700 Breeder Management Supplement

Introduction

This Cobb Breeder Management Supplement is to be used in conjunction with the Cobb Breeder Management Guide to assist you in building your management program. Management must not only meet the basic needs of the stock but also be fine tuned to attain the full potential of the breed. Our recommendations in this booklet are based on current scientific knowledge and practical experience, and reflect the genetic potential of the Cobb hen based on Total Egg and Hatch Percent records taken from the top 25% of Cobb flocks worldwide. This booklet should be used as a guide only, and adapted locally according to your own experience when projecting performance from all flocks in a particular operation. You should be aware of any local legislation which may influence the management practices that you should choose to adopt.

Please contact your Cobb Technical Representative for further assistance.

Revised 2013

Breeder Performance

Age at depletion	(weeks) (days)	60 420	65 455
Age at 5% production	(weeks) (days)	25 175	25 175
Total eggs/hen housed		154.0	167.8
Hatching eggs/hen housed	(50g minimum)	149.8	163.2
Peak hatchability	(%)	90	90
Cumulative hatchability	(%)	87.1	86.5
Broiler chicks/hen housed		130.4	141.2
Livability from 24 weeks	(%)	92.2	91.4

		DARK OUT	OPEN SIDED
Female bodyweight (24 weeks)	(kg) (lb)	2.70 5.95	2.895 6.40
Female bodyweight (65 weeks)	(kg) (lb)	3.90 8.60	4.035 8.90

Cobb 700 Breeder Management Supplement

Female Dark-out Rearing

Age		Bodyweight		Body Weight Gain %
days	weeks	grams	pounds	
0				
7	1	135	0.30	
14	2	270	0.60	100%
21	3	365	0.80	35%
28	4	455	1.00	25%
35	5	545	1.20	20%
42	6	635	1.40	17%
49	7	725	1.60	14%
56	8	815	1.80	12%
63	9	905	2.00	11%
70	10	1000	2.20	10%
77	11	1090	2.40	9%
84	12	1180	2.60	8%
91	13	1270	2.80	8%
98	14	1360	3.00	7%
105	15	1450	3.20	7%
112	16	1540	3.40	6%
119	17	1655	3.65	7%
126	18	1770	3.90	7%
133	19	1885	4.15	7%
140	20	2020	4.45	7%
147	21	2245	4.95	11%
154	22	2380	5.25	6%
161	23	2542	5.60	7%
168	24	2700	5.95	6%
175	25	2860	6.30	6%
182	26	2995	6.60	5%
189	27	3130	6.90	5%
196	28	3245	7.15	4%
203	29	3310	7.30	2%
210	30	3350	7.40	1%

Please refer to the Cobb Breeder Management Guide for general flock management recommendations, as well as guidelines concerning post peak feeding.

Weights correspond to the weekly anniversary date.

Weights for weeks 1 through 20 are off-feed weights. From 21 weeks onward, (or when the change is made to everyday feeding), birds can be weighed after a minimum of two hours has passed from the time of complete cleanup of the day's ration.

Cobb 700 Breeder Management Supplement

Female Open Sided Rearing

Age		Bodyweight		Body Weight Gain %
days	weeks	grams	pounds	
0				
7	1	140	0.30	
14	2	275	0.60	96%
21	3	390	0.85	42%
28	4	490	1.10	26%
35	5	590	1.30	20%
42	6	685	1.50	16%
49	7	780	1.70	14%
56	8	870	1.90	12%
63	9	960	2.10	10%
70	10	1050	2.30	9%
77	11	1140	2.50	9%
84	12	1230	2.70	8%
91	13	1320	2.90	7%
98	14	1410	3.10	7%
105	15	1500	3.30	6%
112	16	1600	3.55	7%
119	17	1710	3.75	7%
126	18	1830	4.05	7%
133	19	1970	4.35	8%
140	20	2130	4.70	8%
147	21	2390	5.25	12%
154	22	2550	5.60	7%
161	23	2715	6.00	6%
168	24	2895	6.40	7%
175	25	3050	6.70	5%
182	26	3180	7.00	4%
189	27	3285	7.25	3%
196	28	3365	7.40	2%
203	29	3415	7.55	1%
210	30	3460	7.63	1%

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Weights correspond to the weekly anniversary date.

Weights for weeks 1 through 20 are off-feed weights. From 21 weeks onward, (or when the change is made to everyday feeding), birds can be weighed after a minimum of two hours has passed from the time of complete cleanup of the day's ration.

Cobb 700 Breeder Management Supplement

Adult Body Weights

	Dark Out Female Body Weight		Open Sided Female Body Weight	
Age	grams	pounds	grams	pounds
30	3350	7.40	3460	7.63
31	3400	7.50	3480	7.67
32	3450	7.61	3500	7.72
33	3470	7.65	3520	7.76
34	3490	7.70	3540	7.80
35	3515	7.75	3560	7.85
36	3540	7.80	3580	7.89
37	3560	7.85	3600	7.94
38	3580	7.90	3620	7.98
39	3605	7.95	3640	8.02
40	3630	8.00	3660	8.07
41	3645	8.04	3675	8.10
42	3655	8.06	3690	8.14
43	3670	8.09	3705	8.17
44	3685	8.12	3720	8.20
45	3695	8.15	3735	8.23
46	3710	8.18	3750	8.27
47	3725	8.21	3765	8.30
48	3740	8.24	3780	8.33
49	3750	8.27	3795	8.37
50	3760	8.29	3810	8.40
51	3770	8.31	3825	8.43
52	3780	8.33	3840	8.47
53	3790	8.35	3855	8.50
54	3800	8.37	3870	8.53
55	3810	8.39	3885	8.57
56	3815	8.41	3900	8.60
57	3825	8.43	3915	8.63
58	3835	8.45	3930	8.66
59	3840	8.47	3945	8.70
60	3850	8.49	3960	8.73
61	3860	8.51	3975	8.76
62	3870	8.53	3990	8.80
63	3880	8.55	4005	8.83
64	3890	8.58	4020	8.86
65	3900	8.60	4035	8.90

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Egg Weights

Age Weeks	Egg Weight grams	Age Weeks	Egg Weight grams
24	48.0	45	64.6
25	49.2	46	64.9
26	50.5	47	65.0
27	51.7	48	65.2
28	52.9	49	65.3
29	54.7	50	65.4
30	56.4	51	65.5
31	57.8	52	65.7
32	58.6	53	65.8
33	59.3	54	65.9
34	59.9	55	66.0
35	60.5	56	66.2
36	61.1	57	66.3
37	61.6	58	66.4
38	62.2	59	66.5
39	62.8	60	66.5
40	63.1	61	66.6
41	63.4	62	66.7
42	63.7	63	66.8
43	64.0	64	66.8
44	64.3	65	66.9

Egg weights are dependent on the bodyweight and production level of the hens, as well as the level of nutrition being fed to the flock. These numbers are a guide only, and could vary considerably according to management conditions.

Cobb 700 Breeder Management Supplement

Breeder Performance

Age in weeks	Total Eggs (%HW)	Hatching Eggs (%HW)	Mortality (%)	% HE (weekly)	Total Eggs (HH)	Hatch. Eggs (HH)	Weekly (%) Hatch	Chicks (HH)
24	2.0	0.8	0.25	40.0	0.1	0.1	72.0	0.0
25	15.0	10.5	0.50	70.0	1.2	0.8	78.0	0.6
26	35.0	28.0	0.75	80.0	3.6	2.7	80.0	2.2
27	55.0	49.5	1.05	90.0	7.4	6.2	82.0	5.0
28	75.0	72.0	1.45	96.0	12.6	11.1	84.0	9.2
29	80.0	77.6	1.95	97.0	18.1	16.5	85.0	13.7
30	84.0	81.9	2.35	97.5	23.8	22.1	86.0	18.5
31	83.0	81.3	2.60	98.0	29.5	27.6	87.0	23.3
32	82.0	80.4	2.85	98.0	35.1	33.1	88.0	28.1
33	81.0	79.8	3.10	98.5	40.6	38.5	89.0	32.9
34	80.0	78.8	3.35	98.5	46.0	43.8	90.0	37.7
35	79.0	78.2	3.55	99.0	51.3	49.1	89.9	42.5
36	77.8	76.6	3.75	98.5	56.5	54.2	89.8	47.1
37	76.6	75.3	3.95	98.3	61.7	59.3	89.7	51.7
38	75.3	74.0	4.15	98.3	66.8	64.3	89.6	56.1
39	74.0	72.7	4.35	98.3	71.7	69.1	89.5	60.5
40	72.7	71.4	4.55	98.3	76.6	73.9	89.4	64.7
41	71.4	70.0	4.75	98.0	81.3	78.6	89.3	68.9
42	70.1	68.7	4.95	98.0	86.0	83.2	89.1	73.0
43	68.8	67.4	5.15	98.0	90.6	87.6	89.0	77.0
44	67.5	66.2	5.35	98.0	95.0	92.0	88.8	80.8
45	66.2	64.9	5.55	98.0	99.4	96.3	88.7	84.6
46	64.9	63.6	5.75	98.0	103.7	100.5	88.4	88.4
47	63.6	62.3	5.90	98.0	107.9	104.6	88.0	92.0
48	62.3	61.1	6.05	98.0	112.0	108.6	87.6	95.5
49	61.0	59.8	6.20	98.0	116.0	112.5	87.2	98.9
50	59.7	58.5	6.35	98.0	119.9	116.4	86.8	102.2
51	58.4	57.2	6.50	98.0	123.7	120.1	86.4	105.5
52	57.1	56.0	6.65	98.0	127.4	123.8	86.0	108.6
53	55.8	54.7	6.80	98.0	131.1	127.3	85.5	111.7
54	54.5	53.4	6.95	98.0	134.6	130.8	85.0	114.6
55	53.2	52.1	7.10	98.0	138.1	134.2	84.5	117.5
56	51.9	50.9	7.25	98.0	141.5	137.5	84.0	120.2
57	50.6	49.6	7.40	98.0	144.7	140.7	83.5	122.9
58	49.3	48.3	7.55	98.0	147.9	143.9	83.0	125.5
59	48.0	47.0	7.70	98.0	151.0	146.9	82.5	128.0
60	46.7	45.8	7.85	98.0	154.0	149.8	82.0	130.4
61	45.4	44.3	8.00	97.5	157.0	152.7	81.5	132.8
62	44.1	43.0	8.15	97.5	159.8	155.5	81.0	135.0
63	42.8	41.7	8.30	97.5	162.6	158.1	80.5	137.2
64	41.5	40.5	8.45	97.5	165.2	160.7	80.0	139.2
65	40.2	39.2	8.60	97.5	167.8	163.2	79.5	141.2

Cobb 700 Breeder Management Supplement

Breeder Flock Fertility and Hatchability

Age in Weeks	Hatchability (%)		Fertility (%)		Hatch of fertiles (%)		Chick No./hen housed	
	Weekly	Cum.	Weekly	Cum.	Weekly	Cum.	Weekly	Cum.
24	72.0	72.0	88.0	88.0	81.8	81.8	0.04	0.0
25	78.0	77.6	90.0	89.9	86.7	86.3	0.57	0.6
26	80.0	79.3	93.0	92.1	86.0	86.1	1.56	2.2
27	82.0	80.8	94.0	93.2	87.2	86.7	2.81	5.0
28	84.0	82.2	95.0	94.0	88.4	87.5	4.17	9.2
29	85.0	83.1	95.0	94.3	89.5	88.1	4.53	13.7
30	86.0	83.9	96.0	94.7	89.6	88.5	4.81	18.5
31	87.0	84.5	96.5	95.1	90.2	88.8	4.82	23.3
32	88.0	85.1	96.5	95.3	91.2	89.2	4.81	28.1
33	89.0	85.6	96.7	95.5	92.0	89.6	4.82	32.9
34	90.0	86.2	96.7	95.7	93.1	90.1	4.80	37.7
35	89.9	86.6	96.7	95.8	93.0	90.4	4.75	42.5
36	89.8	86.9	96.7	95.9	92.9	90.6	4.64	47.1
37	89.7	87.1	96.6	95.9	92.9	90.8	4.54	51.7
38	89.6	87.3	96.6	96.0	92.8	91.0	4.45	56.1
39	89.5	87.5	96.5	96.0	92.7	91.1	4.36	60.5
40	89.4	87.6	96.5	96.0	92.6	91.2	4.27	64.7
41	89.3	87.7	96.4	96.1	92.6	91.3	4.16	68.9
42	89.1	87.8	96.2	96.1	92.6	91.3	4.07	73.0
43	89.0	87.8	96.2	96.1	92.5	91.4	3.98	77.0
44	88.8	87.9	96.1	96.1	92.4	91.4	3.89	80.8
45	88.7	87.9	96.1	96.1	92.2	91.5	3.80	84.6
46	88.4	87.9	96.0	96.1	92.0	91.5	3.71	88.4
47	88.0	87.9	95.7	96.1	91.9	91.5	3.61	92.0
48	87.6	87.9	95.5	96.0	91.7	91.5	3.52	95.5
49	87.2	87.9	95.3	96.0	91.4	91.5	3.42	98.9
50	86.8	87.8	95.0	96.0	91.3	91.5	3.33	102.2
51	86.4	87.8	94.7	95.9	91.2	91.5	3.23	105.5
52	86.0	87.7	94.5	95.9	91.0	91.5	3.14	108.6
53	85.5	87.7	94.2	95.9	90.7	91.5	3.05	111.7
54	85.0	87.6	94.0	95.8	90.4	91.4	2.96	114.6
55	84.5	87.5	93.8	95.8	90.0	91.4	2.86	117.5
56	84.0	87.4	93.2	95.7	90.1	91.4	2.77	120.2
57	83.5	87.3	93.0	95.6	89.7	91.3	2.68	122.9
58	83.0	87.3	92.0	95.6	90.2	91.3	2.59	125.5
59	82.5	87.2	91.5	95.5	90.1	91.3	2.51	128.0
60	82.0	87.1	90.3	95.4	90.8	91.3	2.42	130.4
61	81.5	86.9	90.0	95.3	90.5	91.3	2.32	132.8
62	81.0	86.8	89.0	95.2	91.0	91.3	2.24	135.0
63	80.5	86.7	88.5	95.0	90.9	91.3	2.15	137.2
64	80.0	86.6	87.0	94.9	91.9	91.3	2.07	139.2
65	79.5	86.5	87.0	94.8	91.3	91.3	1.99	141.2

Recommended digestible amino acid levels based on amino acid / lysine ratios

Phase	Starter	Grower/ Pre-breeder	Breeder	Male*
Age (days) (weeks)	0-28 0-4	29-154 5-22	155+ 41+	155+ 23+
Lysine	100	100	100	100
Methionine	44	45	47	50
M + C	75	85	86	90
Tryptophan	22	25	25	29
Threonine	70	83	75	93
Arginine	105	100	90	100
Valine	67	75	80	75
Isoleucine	70	83	76	83
Leucine	118	130	112	120
Histidine	32	33	34	35
Phenylalanine	65	65	66	65
P + T	115	120	120	120

*The recommendations for males 155+ days of age can be used if feeding a separate male feed in production is desired. Cobb males will perform well using a normal hen diet throughout their life, thus avoiding the need to formulate a diet specific for males in production.

Recommended nutrient levels (% per 1000 kcal / Kg metabolizable energy)

Phase Age (days) (weels)	Units	Starter 0-28 0-4		Grower 29-126 5-18		Pre-breeder** 127-154 19-22		Breeder 1 155-280 23-40		Breeder 2 281+ 41+		Male* 155+ 23+	
Crude Protein	%	6.630		5.600		5.590		5.590		5.240		4.717	
Calcium	%	0.358		0.383		0.524		1.048		1.119		0.326	
Av. Phosphorus	%	0.160		0.156		0.157		0.157		0.139		0.163	
Potassium	%	0.215		0.232		0.227		0.227		0.209		0.218	
Sodium	%	0.067		0.075		0.066		0.066		0.066		0.069	
Chloride	%	0.067		0.075		0.066		0.066		0.066		0.069	
Linoleic Acid	%	0.436		0.430		0.419		0.454		0.349		----	
Amino Acid		Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total
Lysine	%	0.322	0.359	0.190	0.230	0.220	0.260	0.230	0.262	0.225	0.255	0.152	0.175
Methionine	%	0.142	0.158	0.086	0.104	0.099	0.117	0.108	0.123	0.106	0.120	0.076	0.088
M + C	%	0.242	0.269	0.162	0.196	0.187	0.221	0.198	0.225	0.194	0.219	0.137	0.158
Tryptophan	%	0.071	0.079	0.048	0.058	0.055	0.065	0.058	0.066	0.056	0.064	0.044	0.051
Threonine	%	0.225	0.251	0.158	0.191	0.183	0.216	0.173	0.199	0.169	0.194	0.141	0.165
Arginine	%	0.338	0.377	0.190	0.230	0.220	0.260	0.207	0.236	0.203	0.230	0.152	0.175
Valine	%	0.216	0.241	0.143	0.173	0.165	0.195	0.184	0.210	0.180	0.204	0.114	0.131
Isoleucine	%	0.225	0.251	0.158	0.191	0.183	0.216	0.175	0.199	0.171	0.194	0.126	0.145
Leucine	%	0.380	0.424	0.247	0.299	0.286	0.338	0.258	0.293	0.252	0.286	0.182	0.210
Histidine	%	0.103	0.115	0.063	0.076	0.073	0.086	0.078	0.089	0.077	0.087	0.053	0.061
Phenylalanine	%	0.209	0.233	0.124	0.150	0.143	0.169	0.152	0.173	0.149	0.168	0.099	0.114
P + T	%	0.370	0.413	0.228	0.276	0.264	0.312	0.276	0.314	0.270	0.306	0.182	0.210

Example: To calculate starter crude protein, assuming a 2860 kcal/kg metabolizable energy diet is 2.860 * 6.630 = 18.96 % crude protein. ** The use of a pre-breeder is optional but recommended for those flocks that are underweight or below desired body composition prior to light stimulation. * The recommendations for males 155+ days of age can be used if feeding a separate male feed in production is desired. Cobb males will perform well using a normal hen diet throughout their life, thus avoiding the need to formulate a diet specific for males in production.

Example for a Breeder feeding program based on recommended nutrient levels

Phase Age (days) (weeks)	Unit	Pre-Starter* 0-14 0-2		Starter 0-28 0-4		Grower 29-126 5-18		Pre-Breeder** 127-154 19-22		Breeder 1 155-280 23-40		Breeder 2 281+ 41+		Male 155+ 23+	
Metabolizable	MJ/kg	12.00		11.70		10.80		11.55		11.55		11.50		11.50	
Energy	kcal/kg	2868		2796		2581		2761		2761		2749		2749	
	kcal/lb	1301		1268		1171		1252		1252		1247		1247	
Crude Protein	%	20.00		18.54		14.45		15.43		15.43		14.40		12.97	
Calcium	%	1.00		1.00		0.99		1.45		2.89		3.08		0.90	
Av. Phosphorus	%	0.45		0.45		0.40		0.43		0.43		0.38		0.45	
Sodium***	%	0.18-0.20		0.18-0.20		0.18-0.20		0.15-0.20		0.15-0.20		0.15-0.20		0.15-0.20	
Chloride***	%	0.18-0.24		0.18-0.24		0.18-0.24		0.15-0.24		0.15-0.24		0.15-0.24		0.15-0.24	
Potassium	%	0.60		0.60		0.60		0.63		0.63		0.57		0.60	
Linoleic Acid	%	1.25		1.22		1.11		1.16		1.25		0.96		-	
Amino Acid		Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total
Lysine	%	1.12	1.25	0.90	1.00	0.49	0.59	0.61	0.72	0.64	0.72	0.62	0.70	0.42	0.48
Methionine	%	0.49	0.55	0.40	0.44	0.22	0.27	0.27	0.32	0.30	0.34	0.29	0.33	0.21	0.24
M + C	%	0.84	0.94	0.68	0.75	0.42	0.51	0.52	0.61	0.55	0.62	0.53	0.60	0.38	0.43
Tryptophan	%	0.25	0.28	0.20	0.22	0.12	0.15	0.15	0.18	0.16	0.18	0.15	0.18	0.12	0.14
Threonine	%	0.78	0.88	0.63	0.70	0.41	0.49	0.51	0.60	0.48	0.55	0.46	0.53	0.39	0.45
Arginine	%	1.18	1.31	0.95	1.05	0.49	0.59	0.61	0.72	0.57	0.65	0.56	0.63	0.42	0.48
Valine	%	0.75	0.84	0.60	0.67	0.37	0.45	0.46	0.54	0.51	0.58	0.49	0.56	0.31	0.36
Isoleucine	%	0.78	0.88	0.63	0.70	0.41	0.49	0.51	0.60	0.48	0.55	0.47	0.53	0.35	0.40
Leucine	%	1.32	1.48	1.06	1.19	0.64	0.77	0.79	0.93	0.71	0.81	0.69	0.79	0.50	0.58
Histidine	%	0.36	0.40	0.29	0.32	0.16	0.20	0.20	0.24	0.22	0.25	0.21	0.24	0.15	0.17
Phenylalanine	%	0.73	0.81	0.58	0.65	0.32	0.39	0.39	0.47	0.42	0.48	0.41	0.46	0.27	0.31
P + T	%	1.29	1.44	1.03	1.15	0.59	0.71	0.73	0.86	0.76	0.87	0.74	0.84	0.50	0.58

*The use of a Pre-Starter feed may be necessary if the required bodyweights cannot be achieved with the Starter diet. In this case, the Starter diet may be used from 15 to 28 days.

**The use of a Pre-Breeder is optional but recommended for those flocks that are underweight or below desired body composition prior to light stimulation.

***The concentrations may need to be adjusted depending on individual experiences and local climate.

Recommended supplementary levels of vitamins and trace elements per tonne basis.

Phase Age (days) (weeks)	Units	Starter 0-28 0-4	Grower 29-126 5-18	Pre-breeder/ Breeder 127+ 19+
Vit. A (Maize Diets)	MIU	10	10	12
Vit. A (Wheat Diets)	MIU	11	11	13
Vit D3	MIU	3	3	3
Vit E	KIU	75-80	45-50	50-100
Vit. K	g	3	3	6
Thiamine	g	2	2	2.5-3.5
Riboflavin	g	5-8	5-7	10-16
Pantothenic Acid	g	8-12	8-10	25
Niacin	g	20-40	20-35	40
Pyridoxine	g	3	3	6
Folic Acid	g	1.5	1	4
Vit B12	mg	25	20	35-40
Biotin (Maize Diets)	mg	250	250	300
Biotin (Wheat Diets)	mg	300	300	375
Vit. C	g	25	25	50
Choline	g	300-350	200-300	250-450
Manganese	g	100	100	120
Zinc	g	100	120	110
Iron	g	20-50	20-50	40-55
Copper	g	10-15	10-15	10-15
Iodine	g	1.5	0.5	2
Selenium	g	0.3	0.3	0.3

MIU = million international units; KIU = thousand international units; g = grams; mg = milligrams
Supplementary levels of vitamins and trace elements should always be reviewed to ensure total levels do not exceed those set in local legislation.

Notes

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