

**Breeder
Management
Supplement**

CobbAvian48™

cobb-vantress.com



breeder

Avian 48 Breeder Management Supplement

Introduction

This Cobb Breeder Management Supplement is to be used in conjunction with the Cobb Breeder Management Guide and the Cobb Breeder Nutrition Supplement 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 2008

Breeder Performance

Age at depletion	(weeks) (days)	60 420	65 455
Age at 5% production	(weeks) (days)	24 168	24 168
Total eggs/hen housed		173.7	192.4
Hatching eggs/hen housed	(50g minimum)	164.0	182.0
Peak hatchability	(%)	90	90
Cumulative hatchability	(%)	85.0	84.1
Broiler chicks/hen housed		139.3	153.1
Livability from 24 weeks	(%)	94.4	93.9

		DARK OUT	OPEN SIDED
Female bodyweight (24 weeks)	(kg) (lb)	2.87 6.33	3.04 6.70
Female bodyweight (65 weeks)	(kg) (lb)	3.86 8.51	3.99 8.80

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Female Dark-out Rearing

days	Age		Bodyweight		Body Weight Gain %
	weeks		grams	pounds	
0					
7	1		130	0.29	
14	2		230	0.51	75%
21	3		340	0.75	43%
28	4		460	1.01	30%
35	5		560	1.23	19%
42	6		660	1.46	16%
49	7		770	1.70	14%
56	8		880	1.94	12%
63	9		990	2.18	11%
70	10		1100	2.43	8%
77	11		1210	2.67	8%
84	12		1320	2.91	8%
91	13		1420	3.13	7%
98	14		1520	3.35	6%
105	15		1620	3.57	6%
112	16		1720	3.79	5%
119	17		1830	4.03	8%
126	18		1950	4.30	8%
133	19		2070	4.56	7%
140	20		2200	4.85	7%
147	21		2480	5.47	12%
154	22		2610	5.75	7%
161	23		2750	6.06	6%
168	24		2870	6.33	6%
175	25		3000	6.61	3%
182	26		3100	6.83	3%
189	27		3200	7.05	3%
196	28		3300	7.28	3%
203	29		3380	7.45	2%
210	30		3440	7.58	2%

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.

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Female Open Sided Rearing

days	Age		Bodyweight		Body Weight Gain %
	weeks		grams	pounds	
0					
7	1		130	0.29	
14	2		230	0.51	77%
21	3		340	0.75	48%
28	4		460	1.01	35%
35	5		560	1.23	22%
42	6		660	1.46	18%
49	7		770	1.70	17%
56	8		880	1.94	14%
63	9		990	2.18	13%
70	10		1100	2.43	11%
77	11		1220	2.69	11%
84	12		1340	2.95	10%
91	13		1470	3.24	10%
98	14		1600	3.53	9%
105	15		1720	3.79	8%
112	16		1850	4.08	8%
119	17		1980	4.37	7%
126	18		2110	4.65	7%
133	19		2240	4.94	6%
140	20		2370	5.22	6%
147	21		2650	5.84	12%
154	22		2780	6.13	5%
161	23		2910	6.42	5%
168	24		3040	6.70	4%
175	25		3140	6.92	3%
182	26		3240	7.14	3%
189	27		3340	7.36	3%
196	28		3440	7.58	3%
203	29		3520	7.76	2%
210	30		3580	7.89	2%

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Male Body Weights

days	Age		Bodyweight		Body Weight Gain %
	weeks		grams	pounds	
0					
7	1		150	0.33	
14	2		330	0.73	120%
21	3		520	1.15	58%
28	4		690	1.52	33%
35	5		840	1.85	22%
42	6		1000	2.20	19%
49	7		1140	2.51	14%
56	8		1270	2.80	11%
63	9		1400	3.09	10%
70	10		1520	3.35	9%
77	11		1650	3.64	9%
84	12		1780	3.92	8%
91	13		1920	4.23	8%
98	14		2060	4.54	7%
105	15		2210	4.87	7%
112	16		2350	5.18	6%
119	17		2500	5.51	6%
126	18		2640	5.82	6%
133	19		2800	6.17	6%
140	20		2960	6.53	6%
147	21		3250	7.17	10%
154	22		3355	7.40	3%
161	23		3470	7.65	3%
168	24		3590	7.91	3%
175	25		3700	8.16	3%
182	26		3790	8.36	2%
189	27		3880	8.55	2%
196	28		3960	8.73	2%
203	29		4030	8.88	2%
210	30		4090	9.02	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.

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Adult Body Weights

Age	Dark Out Female Body Weight		Open Sided Female Body Weight		Male Body Weight	
	grams	pounds	grams	pounds	grams	pounds
30	3440	7.58	3580	7.89	4090	9.02
31	3470	7.65	3600	7.94	4140	9.13
32	3500	7.72	3620	7.98	4180	9.22
33	3525	7.77	3640	8.02	4210	9.28
34	3550	7.83	3660	8.07	4235	9.34
35	3560	7.85	3680	8.11	4260	9.39
36	3570	7.87	3700	8.16	4285	9.45
37	3580	7.89	3710	8.18	4310	9.50
38	3590	7.91	3720	8.20	4335	9.56
39	3600	7.94	3730	8.22	4360	9.61
40	3610	7.96	3740	8.25	4385	9.67
41	3620	7.98	3750	8.27	4410	9.72
42	3630	8.00	3760	8.29	4435	9.78
43	3640	8.02	3770	8.31	4460	9.83
44	3650	8.05	3780	8.33	4485	9.89
45	3660	8.07	3790	8.36	4510	9.94
46	3670	8.09	3800	8.38	4535	10.00
47	3680	8.11	3810	8.40	4560	10.05
48	3690	8.14	3820	8.42	4585	10.11
49	3700	8.16	3830	8.44	4610	10.16
50	3710	8.18	3840	8.47	4635	10.22
51	3720	8.20	3850	8.49	4660	10.27
52	3730	8.22	3860	8.51	4685	10.33
53	3740	8.25	3870	8.53	4710	10.38
54	3750	8.27	3880	8.55	4735	10.44
55	3760	8.29	3890	8.58	4760	10.49
56	3770	8.31	3900	8.60	4785	10.55
57	3780	8.33	3910	8.62	4810	10.60
58	3790	8.36	3920	8.64	4835	10.66
59	3800	8.38	3930	8.66	4860	10.71
60	3810	8.40	3940	8.69	4885	10.77
61	3820	8.42	3950	8.71	4910	10.82
62	3830	8.44	3960	8.73	4935	10.88
63	3840	8.47	3970	8.75	4960	10.93
64	3850	8.49	3980	8.77	4985	10.99
65	3860	8.51	3990	8.80	5010	11.05

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Breeder Performance

Age in weeks	Total Eggs (%HW)	Hatching Eggs (%HW)	Mortality (%)	% HE (weekly)	Cum. Total Eggs (HH)	Cum. Hatch. Eggs (HH)	Weekly (%) Hatch	No. of Chicks (HH)
24	5.0	2.0	0.25	40.0	0.3	0.1	73.0	0.1
25	15.0	7.5	0.50	50.0	1.4	0.7	76.5	0.5
26	35.0	22.8	0.75	65.0	3.8	2.2	80.0	1.8
27	60.0	45.0	1.10	75.0	8.0	5.4	82.0	4.3
28	75.0	67.5	1.50	90.0	13.2	10.0	83.0	8.2
29	82.0	75.4	1.80	92.0	18.8	15.2	84.0	12.5
30	84.0	79.0	2.00	94.0	24.5	20.6	85.0	17.1
31	85.0	80.8	2.20	95.0	30.4	26.1	86.0	21.9
32	84.8	81.4	2.40	96.0	36.2	31.7	87.0	26.7
33	84.5	81.1	2.60	96.0	41.9	37.2	88.0	31.6
34	84.3	80.9	2.80	96.0	47.7	42.7	89.0	36.5
35	83.8	80.4	3.00	96.0	53.3	48.2	90.0	41.4
36	83.3	79.9	3.15	96.0	59.0	53.6	89.8	46.3
37	82.8	79.4	3.28	96.0	64.6	59.0	89.5	51.1
38	81.8	78.5	3.38	96.0	70.1	64.3	89.1	55.8
39	80.8	77.5	3.48	96.0	75.6	69.5	88.7	60.5
40	79.9	76.7	3.58	96.0	81.0	74.7	88.2	65.0
41	78.9	75.7	3.68	96.0	86.3	79.8	87.7	69.5
42	77.9	74.8	3.77	96.0	91.5	84.9	87.2	73.9
43	76.9	73.8	3.87	96.0	96.7	89.8	86.7	78.2
44	75.9	72.9	3.97	96.0	101.8	94.7	86.2	82.4
45	74.9	71.9	4.07	96.0	106.8	99.6	85.7	86.6
46	73.9	70.9	4.17	96.0	111.8	104.3	85.2	90.6
47	72.9	70.3	4.27	96.5	116.7	109.0	84.7	94.6
48	71.9	69.4	4.37	96.5	121.5	113.7	84.2	98.5
49	70.9	68.4	4.47	96.5	126.2	118.2	83.7	102.4
50	69.9	67.5	4.57	96.5	130.9	122.7	83.2	106.1
51	68.9	66.5	4.67	96.5	135.5	127.2	82.7	109.8
52	67.9	65.5	4.77	96.5	140.0	131.6	82.2	113.4
53	66.9	64.6	4.87	96.5	144.5	135.9	81.7	116.9
54	65.9	63.6	4.97	96.5	148.9	140.1	81.2	120.3
55	64.9	62.6	5.07	96.5	153.2	144.2	80.7	123.7
56	63.9	61.7	5.17	96.5	157.4	148.3	80.2	127.0
57	62.9	60.7	5.27	96.5	161.6	152.4	79.7	130.2
58	61.9	59.7	5.37	96.5	165.7	156.3	79.2	133.3
59	60.9	58.8	5.47	96.5	169.7	160.2	78.7	136.4
60	59.9	57.5	5.57	96.0	173.7	164.0	78.2	139.3
61	58.9	56.5	5.67	96.0	177.6	167.7	77.7	142.2
62	57.9	55.6	5.77	96.0	181.4	171.4	77.2	145.1
63	56.9	54.6	5.87	96.0	185.1	175.0	76.7	147.8
64	55.9	53.7	5.97	96.0	188.8	178.5	76.2	150.5
65	54.9	52.7	6.07	96.0	192.4	182.0	75.7	153.1

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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	73.0	73.0	88.0	88.0	83.0	83.0	0.10	0.1
25	76.5	75.8	90.0	89.6	85.0	84.6	0.40	0.5
26	80.0	78.7	93.0	92.0	86.0	85.6	1.26	1.8
27	82.0	80.6	94.0	93.2	87.2	86.6	2.55	4.3
28	83.0	81.7	95.0	94.0	87.4	86.9	3.86	8.2
29	84.0	82.5	95.0	94.4	88.4	87.4	4.36	12.5
30	85.0	83.2	96.0	94.8	88.5	87.7	4.60	17.1
31	86.0	83.8	96.5	95.1	89.1	88.0	4.75	21.9
32	87.0	84.3	96.5	95.4	90.2	88.4	4.84	26.7
33	88.0	84.9	96.7	95.6	91.0	88.8	4.87	31.6
34	89.0	85.4	96.7	95.7	92.0	89.2	4.90	36.5
35	90.0	85.9	96.7	95.8	93.1	89.7	4.91	41.4
36	89.8	86.3	96.7	95.9	92.9	90.0	4.87	46.3
37	89.5	86.6	96.6	96.0	92.7	90.2	4.81	51.1
38	89.1	86.8	96.6	96.0	92.2	90.4	4.73	55.8
39	88.7	87.0	96.5	96.1	91.9	90.5	4.65	60.5
40	88.2	87.0	96.5	96.1	91.4	90.6	4.57	65.0
41	87.7	87.1	96.4	96.1	91.0	90.6	4.48	69.5
42	87.2	87.1	96.2	96.1	90.6	90.6	4.39	73.9
43	86.7	87.1	96.2	96.1	90.1	90.6	4.31	78.2
44	86.2	87.0	96.1	96.1	89.7	90.5	4.22	82.4
45	85.7	87.0	96.1	96.1	89.2	90.5	4.14	86.6
46	85.2	86.9	96.0	96.1	88.8	90.4	4.05	90.6
47	84.7	86.8	95.7	96.1	88.5	90.3	3.99	94.6
48	84.2	86.7	95.5	96.1	88.2	90.2	3.91	98.5
49	83.7	86.6	95.3	96.0	87.8	90.1	3.83	102.4
50	83.2	86.4	95.0	96.0	87.6	90.0	3.75	106.1
51	82.7	86.3	94.7	96.0	87.3	89.9	3.67	109.8
52	82.2	86.2	94.5	95.9	87.0	89.8	3.59	113.4
53	81.7	86.0	94.2	95.9	86.7	89.7	3.51	116.9
54	81.2	85.9	94.0	95.8	86.4	89.6	3.43	120.3
55	80.7	85.7	93.8	95.7	86.0	89.5	3.36	123.7
56	80.2	85.6	93.2	95.7	86.1	89.5	3.28	127.0
57	79.7	85.4	93.0	95.6	85.7	89.4	3.21	130.2
58	79.2	85.3	92.0	95.5	86.1	89.3	3.13	133.3
59	78.7	85.1	91.5	95.4	86.0	89.2	3.06	136.4
60	78.2	85.0	90.3	95.3	86.6	89.1	2.97	139.3
61	77.7	84.8	90.0	95.2	86.3	89.1	2.90	142.2
62	77.2	84.6	89.0	95.0	86.7	89.0	2.83	145.1
63	76.7	84.5	88.5	94.9	86.7	89.0	2.76	147.8
64	76.2	84.3	87.0	94.8	87.6	89.0	2.69	150.5
65	75.7	84.1	87.0	94.6	87.0	88.9	2.62	153.1

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Egg Weights

Age Weeks	Egg Weight grams		Age Weeks	Egg Weight grams
24	48.2		45	66.1
25	50.0		46	66.3
26	52.8		47	66.6
27	55.0		48	66.9
28	56.2		49	67.2
29	57.1		50	67.2
30	57.9		51	67.7
31	58.7		52	67.9
32	59.5		53	68.1
33	60.3		54	68.3
34	61.0		55	68.5
35	61.7		56	68.7
36	62.4		57	68.8
37	63.0		58	68.9
38	63.4		59	69.0
39	63.8		60	69.1
40	64.2		61	69.2
41	64.6		62	69.3
42	65.0		63	69.4
43	65.4		64	69.5
44	65.8		65	69.6

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.

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

Phase Age (days)	Starter 0-28	Grower/ Pre-breeder 29-154	Breeder 155+	Male 155+
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

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

Phase Age (days)	Units	Starter 0-28		Grower 29-125		Pre-breeder** 126-154		Breeder 1 155-280		Breeder 2 281+		Male 155+	
		Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total	Dig.	Total
Crude Protein	%	6.630	5.600	5.600	5.590	5.590	5.240	5.590	5.240	5.240	4.717		
Calcium	%	0.358	0.383	0.383	0.524	0.524	1.119	1.048	1.119	1.119	0.326		
Av. Phosphorus	%	0.160	0.156	0.156	0.157	0.157	0.139	0.157	0.139	0.139	0.163		
Potassium	%	0.215	0.232	0.232	0.227	0.227	0.209	0.227	0.209	0.209	0.218		
Sodium	%	0.067	0.075	0.075	0.066	0.066	0.066	0.066	0.066	0.066	0.069		
Chloride	%	0.067	0.075	0.075	0.066	0.066	0.066	0.066	0.066	0.066	0.069		
Linoleic Acid	%	0.436	0.430	0.430	0.419	0.419	0.349	0.454	0.349	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.**

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

Phase Age (days)	Units	Starter 0-28	Grower 29-125	Pre-breeder/ Breeder 126+
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.

Avian 48 Breeder Management Supplement

Notes

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