

PARENTS STOCK

ROSS 708

Performance
Objectives

2016



Introduction

This booklet contains the performance objectives for Ross® 708 Parent Stock and should be used in conjunction with the **Ross Parent Stock Management Handbook**.

Performance

Poultry production is a global activity, but across the world there are differing management strategies adapted to local conditions.

These performance objectives are for birds that receive the first light stimulation **after** 21 weeks (147 days) of age. This is the most common strategy used worldwide as it gives distinct advantages in early egg size, chick number, and broiler chick quality. If flocks reach 5-10% production prior to 25 weeks of age, early egg size will be reduced resulting in smaller chicks. In managing this, the timing of photostimulation is key.

Achieving the genetic potential of the birds depends on:

- Management to provide birds with their required environment.
- A dietary regime that provides the appropriate nutrients.
- Effective biosecurity and disease control.

If any one of these elements is sub-optimal, performance will suffer. The 3 sectors, environment, nutrition and health, are also interdependent. A problem in any one will result in a negative response by the bird to the other factors.

Data contained within this booklet indicates the performance that can be achieved under good management and environmental conditions and should therefore be regarded as “Performance Objectives” and not specifications. In practice, variations in performance may occur for a wide variety of reasons. For example, feed consumption can be affected significantly by form of feed, energy level, and house temperature.

While every attempt has been made to ensure the accuracy and relevance of the information presented, Aviagen® accepts no liability for the consequences of using this information to manage parent stock.

All weight measurements are shown in both **metric (kg/g)** and **imperial (lb/oz)** to reflect the global nature of this publication.

In the tables, values are rounded. This may result in small inaccuracies when using the objectives to calculate other performance statistics.

For further information on the management of Ross stock, please contact your local Ross representative.

Contents

04	Performance Summary
05	Female Body Weight and Feeding Program
06	Feeding into Lay and Nutrition Allocation at Peak
07	Male Body Weight and Feeding Program
08	Weekly Egg Production
9	Weekly Hatchability and Chick Production
10	Weekly Egg Weight and Egg Mass

Performance Summary

Global Ross 708 breeder performance objectives for birds light-stimulated **after** 21 weeks (147 days).

Summary of 40 weeks of production.

Age at depletion (days) (weeks)	448 64	448 64
Total Eggs (HHA*)	173	173
Hatching Eggs (HHA*)	167	167
Chicks/female housed at 175 days (25 weeks)	144	144
Hatchability %	85.8	85.8
Age at 5% Production (days) (weeks)	175 25	175 25
Peak Production %	82.4	82.4
Body weight at 175 days (25 weeks)	2690 g	5.93 lb
Body weight at depletion	3825-3925 g	8.43-8.65 lb
Mortality + culls % (rearing period)	4-5	4-5
Mortality % (laying period)	8	8
Feed/100 Chicks** day old - 448 days (0-64 weeks)	38.6 kg	81.1 lb
Feed/100 Hatching Eggs** day old - 448 days (0-64 weeks)	30.5 kg	67.2 lb

KEY
 (kg/g) – metric measurement
 (lb/oz) – imperial measurement

NOTES

* *Hen-Housed Average.*

** *Feed amounts expressed in the table do not include male feed allocations.*

Female Body Weight and Feeding Program

Age (days)	Age (weeks)	Body Weight (g)	Weekly Gain (g)	Feed (g/bird/day)	Body Weight (lb)	Weekly Gain (lb)	Feed (lb/100/day)	Energy Intake (kcal/bird/day)*
Day old	0	40		ad lib	0.09		ad libitum	ad lib
7	1	110	70	24	0.24	0.15	5.2	66
14	2	215	105	27	0.47	0.23	6.0	76
21	3	310	95	30	0.68	0.21	6.7	85
28	4	400	90	33	0.88	0.20	7.2	91
35	5	490	90	35	1.08	0.20	7.6	97
42	6	580	90	37	1.28	0.20	8.2	104
49	7	670	90	40	1.48	0.20	8.7	111
56	8	760	90	42	1.67	0.19	9.3	118
63	9	850	90	44	1.87	0.20	9.8	124
70	10	940	90	46	2.07	0.20	10.2	130
77	11	1030	90	49	2.27	0.20	10.9	138
84	12	1120	90	52	2.47	0.20	11.5	146
91	13	1210	90	56	2.67	0.20	12.3	156
98	14	1300	90	59	2.86	0.19	12.9	164
105	15	1390	90	62	3.06	0.20	13.6	173
112	16	1480	90	66	3.26	0.20	14.6	185
119	17	1585	105	71	3.49	0.23	15.6	198
126	18	1700	115	76	3.74	0.25	16.7	212
133	19	1825	125	81	4.02	0.28	17.9	227
140	20	1960	135	86	4.32	0.30	19.0	242
147	21	2100	140	92	4.63	0.31	20.4	259
154	22	2245	145	98	4.94	0.31	21.6	274
161	23	2395	150	104	5.28	0.34	22.9	291
168	24	2545	150	110	5.61	0.33	24.3	308
175	25	2690	145	118	5.93	0.32	26.0	331
182	26	2825	135	130	6.22	0.29	28.6	364
189	27	2955	130	145	6.51	0.29	31.9	406
196	28	3055	100	159	6.73	0.22	34.9	444
203	29	3145	90	159	6.93	0.20	34.9	444
210	30	3230	85	159	7.11	0.18	34.9	444
217	31	3285	55	159	7.24	0.13	34.9	444
224	32	3330	45	159	7.33	0.09	34.9	444
231	33	3370	40	159	7.42	0.09	34.9	444
238	34	3400	30	159	7.49	0.07	34.9	444
245	35	3430	30	159	7.56	0.07	34.9	444
252	36	3450	20	158	7.60	0.04	34.9	443
259	37	3470	20	158	7.64	0.04	34.8	442
266	38	3485	15	158	7.68	0.04	34.7	441
273	39	3500	15	157	7.71	0.03	34.6	440
280	40	3515	15	157	7.74	0.03	34.6	440
287	41	3530	15	157	7.78	0.04	34.5	439
294	42	3545	15	156	7.81	0.03	34.4	438
301	43	3560	15	156	7.84	0.03	34.4	437
308	44	3575	15	156	7.87	0.03	34.3	436
315	45	3590	15	155	7.91	0.04	34.2	435
322	46	3605	15	155	7.94	0.03	34.1	434
329	47	3620	15	155	7.97	0.03	34.1	433
336	48	3635	15	154	8.01	0.04	34.0	432
343	49	3650	15	154	8.04	0.03	33.9	431
350	50	3665	15	154	8.07	0.03	33.9	431
357	51	3680	15	153	8.11	0.04	33.8	430
364	52	3695	15	153	8.14	0.03	33.7	429
371	53	3710	15	153	8.17	0.03	33.7	428
378	54	3725	15	152	8.20	0.03	33.6	427
385	55	3740	15	152	8.24	0.04	33.5	426
392	56	3755	15	152	8.27	0.03	33.4	425
399	57	3770	15	152	8.30	0.03	33.4	424
406	58	3785	15	151	8.34	0.04	33.3	423
413	59	3800	15	151	8.37	0.03	33.2	422
420	60	3815	15	151	8.40	0.03	33.2	422
427	61	3830	15	150	8.44	0.04	33.1	421
434	62	3845	15	150	8.47	0.03	33.0	420
441	63	3860	15	150	8.50	0.03	32.9	419
448	64	3875	15	149	8.54	0.04	32.9	418

KEY
 (kg/g) – metric measurement
 (lb/oz) – imperial measurement

*Feed quantities are given as a guide only, based on recommend dietary energy levels of a 2- or 3-stage rearing program (2800 kcal ME/kg; 1270 kcal ME/lb). Adjustments must be made to reflect feeding differing energy levels.

NOTES
 Weekly body-weight gain beyond 38 weeks (266 days) should average approximately 15 g (0.03-0.04 lb).
 Body weights are based on a feed day, 4-6 hours after feeding.

Female Feeding into Lay

Hen-Day (%)	Daily Energy Intake (kcal ME/bird/day)*	Feed Intake (g/bird/day)	Feed Increase (g/bird/day)
5	331	118	
10	343	123	5
15	355	127	4
20	368	131	4
25	372	133	2
30	379	135	2
35	386	138	3
40	393	140	2
45	400	143	3
50	407	145	2
55	416	149	4
60	425	152	3
65	434	155	3
70	442	158	3
peak	444	159	1

*Daily energy and feed intakes are based on current recommended dietary levels of energy (2800 kcal ME/kg; 1270 kcal ME/lb) and assuming an ambient temperature of 20-21°C (68-70°F).

NOTES

Feeding programs should be adjusted according to actual feed intake at 5% hen-day production. It may be necessary to adjust feed amounts daily (rather than every 5% as given in the table), taking into account the rate of daily production. Adjustments to feed amounts will need to be made if dietary energy levels are different to those recommended or if environmental temperatures are warmer or cooler than assumed here.

Nutrient Allocation at Peak Production

Nutrient	Nutrient Allocation at Peak
Energy (kcal/bird/day)*	444
Digestible Amino Acids (mg/bird/day)	
Lysine	954
Methionine & Cystine	938
Methionine	588
Threonine	779
Valine	890
Isoleucine	795
Argenine	1256
Tryptophan	223
Minerals (mg/bird/day)	
Calcium	4770
Available Phosphorus	557

*Based on a recommended energy level of 2800 kcal ME/kg (1270 kcal ME/lb).

Male Body Weight and Feeding Program

Age (days)	Age (weeks)	Body Weight (g)	Weekly Gain (g)	Feed (g/bird/day)	Body Weight (lb)	Weekly Gain (lb)	Feed (lb/100/day)	Energy Intake (kcal/bird/day)*
Day old	0	40		ad libitum	0.09		ad libitum	
7	1	150	110	35	0.33	0.24	7.6	97
14	2	320	170	42	0.70	0.37	9.3	118
21	3	525	205	48	1.16	0.46	10.5	134
28	4	755	230	52	1.66	0.50	11.5	147
35	5	945	190	56	2.08	0.42	12.4	158
42	6	1130	185	60	2.49	0.41	13.2	168
49	7	1280	150	63	2.82	0.33	13.9	177
56	8	1420	140	66	3.13	0.31	14.6	185
63	9	1545	125	69	3.40	0.27	15.2	194
70	10	1670	125	72	3.68	0.28	15.9	202
77	11	1795	125	75	3.95	0.27	16.5	210
84	12	1920	125	78	4.23	0.28	17.2	218
91	13	2045	125	81	4.50	0.27	17.8	227
98	14	2170	125	84	4.78	0.28	18.6	236
105	15	2295	125	88	5.06	0.28	19.3	246
112	16	2420	125	92	5.33	0.27	20.2	257
119	17	2560	140	96	5.64	0.31	21.2	269
126	18	2715	155	101	5.98	0.34	22.2	282
133	19	2875	160	106	6.33	0.35	23.3	296
140	20	3035	160	111	6.69	0.36	24.4	310
147	21	3195	160	115	7.04	0.35	25.4	323
154	22	3355	160	120	7.39	0.35	26.3	335
161	23	3515	160	123	7.74	0.35	27.2	346
168	24	3675	160	127	8.09	0.35	27.9	355
175	25	3825	150	129	8.43	0.34	28.4	361
182	26	3960	135	131	8.72	0.29	28.8	366
189	27	4035	75	132	8.89	0.17	29.2	371
196	28	4090	55	134	9.01	0.12	29.4	374
203	29	4120	30	135	9.07	0.06	29.7	377
210	30	4150	30	136	9.14	0.07	29.9	380
217	31	4180	30	136	9.21	0.07	30.1	382
224	32	4210	30	137	9.27	0.06	30.2	384
231	33	4240	30	138	9.34	0.07	30.4	386
238	34	4270	30	138	9.41	0.07	30.5	388
245	35	4300	30	139	9.47	0.06	30.6	389
252	36	4330	30	140	9.54	0.07	30.7	391
259	37	4360	30	140	9.60	0.06	30.9	392
266	38	4390	30	141	9.67	0.07	31.0	394
273	39	4420	30	141	9.74	0.07	31.1	395
280	40	4450	30	142	9.80	0.06	31.2	397
287	41	4480	30	142	9.87	0.07	31.3	398
294	42	4510	30	143	9.93	0.06	31.4	399
301	43	4540	30	143	10.00	0.07	31.5	401
308	44	4570	30	144	10.07	0.07	31.6	402
315	45	4600	30	144	10.13	0.06	31.7	403
322	46	4630	30	144	10.20	0.07	31.8	404
329	47	4660	30	145	10.26	0.06	31.9	406
336	48	4690	30	145	10.33	0.07	32.0	407
343	49	4720	30	146	10.40	0.07	32.1	408
350	50	4750	30	146	10.46	0.06	32.2	410
357	51	4780	30	147	10.53	0.07	32.3	411
364	52	4810	30	147	10.59	0.06	32.4	412
371	53	4840	30	148	10.66	0.07	32.5	413
378	54	4870	30	148	10.73	0.07	32.6	415
385	55	4900	30	149	10.79	0.06	32.7	416
392	56	4930	30	149	10.86	0.07	32.8	417
399	57	4960	30	149	10.93	0.07	32.9	419
406	58	4990	30	150	10.99	0.06	33.0	420
413	59	5020	30	150	11.06	0.07	33.1	421
420	60	5050	30	151	11.12	0.06	33.2	422
427	61	5080	30	151	11.19	0.07	33.3	424
434	62	5110	30	152	11.26	0.07	33.4	425
441	63	5140	30	152	11.32	0.06	33.5	426
448	64	5170	30	153	11.39	0.07	33.6	427

KEY
 (kg/g) – metric measurement
 (lb/oz) – imperial measurement

*Feed quantities are given as a guide only, based on recommended dietary energy levels of a 2- or 3-stage rearing program (2800 kcal ME/kg; 1270 kcal ME/lb) and a male diet in lay (2700 kcal ME/kg; 1225 kcal ME/lb). Adjustments must be made to reflect feeding differing energy levels.

NOTES
 Body weights are those 4-6 hours after feeding.
 This profile allows the male to reach sexual maturity by first egg. Weekly body-weight gain beyond 29 weeks (203 days) should average approximately 30 g (0.06-0.07 lb).
 Field performance has shown that this practice ensures that the body condition of the males is not compromised so they will maintain the best possible fertility levels.

Weekly Egg Production

Week of Production	Age (days)	Age (weeks)	Hen-Housed (%)	Hen-Week (%)*	Eggs/Bird/Week Hen-Housed	Eggs/Bird/Cum. Hen-Housed	Hatching Eggs/Bird/Week**	Hatching Eggs/Bird/Cum.	Hatching Egg Utilization Weekly	Hatching Egg Utilization Cum.
1	175	25	5.4	5.4	0.38	0.38				
2	182	26	18.9	18.9	1.32	1.70	0.92	0.92	69.70	54.12
3	189	27	48.9	49.2	3.42	5.12	3.02	3.94	88.30	76.95
4	196	28	70.3	70.9	4.92	10.04	4.52	8.46	91.87	84.26
5	203	29	78.9	79.7	5.52	15.56	5.22	13.68	94.57	87.92
6	210	30	81.7	82.7	5.72	21.28	5.52	19.20	96.50	90.23
7	217	31	82.4	83.6	5.77	27.05	5.62	24.82	97.40	91.76
8	224	32	81.7	83.0	5.72	32.77	5.62	30.44	98.25	92.89
9	231	33	80.6	82.0	5.64	38.41	5.54	35.98	98.23	93.67
10	238	34	79.4	81.0	5.56	43.97	5.46	41.44	98.18	94.24
11	245	35	78.3	80.0	5.48	49.45	5.38	46.82	98.13	94.67
12	252	36	77.1	79.0	5.40	54.85	5.30	52.11	98.08	95.01
13	259	37	76.0	78.0	5.32	60.17	5.22	57.33	98.03	95.28
14	266	38	74.9	77.0	5.24	65.41	5.13	62.46	97.98	95.49
15	273	39	73.7	76.0	5.16	70.57	5.05	67.51	97.93	95.67
16	280	40	72.4	74.8	5.07	75.64	4.96	72.48	97.88	95.82
17	287	41	71.3	73.8	4.99	80.63	4.88	77.36	97.83	95.94
18	294	42	70.1	72.8	4.91	85.54	4.80	82.16	97.78	96.05
19	301	43	69.0	71.7	4.83	90.37	4.72	86.88	97.73	96.14
20	308	44	67.9	70.7	4.75	95.12	4.64	91.52	97.68	96.22
21	315	45	66.7	69.6	4.67	99.79	4.56	96.08	97.63	96.28
22	322	46	65.6	68.6	4.59	104.38	4.48	100.56	97.58	96.34
23	329	47	64.4	67.5	4.51	108.89	4.40	104.96	97.54	96.39
24	336	48	63.1	66.3	4.42	113.31	4.31	109.27	97.49	96.43
25	343	49	62.0	65.3	4.34	117.65	4.23	113.50	97.44	96.47
26	350	50	60.9	64.2	4.26	121.91	4.15	117.64	97.39	96.50
27	357	51	59.7	63.1	4.18	126.09	4.07	121.71	97.34	96.53
28	364	52	58.6	62.0	4.10	130.19	3.99	125.70	97.29	96.55
29	371	53	57.4	61.0	4.02	134.21	3.91	129.61	97.24	96.57
30	378	54	56.3	59.9	3.94	138.15	3.83	133.44	97.19	96.59
31	385	55	55.1	58.8	3.86	142.01	3.75	137.19	97.14	96.61
32	392	56	53.9	57.5	3.77	145.78	3.66	140.85	97.09	96.62
33	399	57	52.7	56.4	3.69	149.47	3.58	144.43	97.04	96.63
34	406	58	51.6	55.3	3.61	153.08	3.50	147.93	96.99	96.64
35	413	59	50.4	54.2	3.53	156.61	3.42	151.35	96.94	96.64
36	420	60	49.3	53.1	3.45	160.06	3.34	154.70	96.89	96.65
37	427	61	48.1	52.0	3.37	163.43	3.26	157.96	96.84	96.65
38	434	62	47.0	50.9	3.29	166.72	3.18	161.15	96.79	96.66
39	441	63	45.9	49.7	3.21	169.93	3.11	164.25	96.75	96.66
40	448	64	44.6	48.4	3.12	173.05	3.02	167.27	96.79	96.66

NOTES

* Hen-week (%) is based on the assumption that mortality in lay is 8% with 0.2% mortality per week.

** A hatching egg is considered to be an egg which is 50 g (21.2 oz/dozen) or heavier.

Weekly Hatchability and Chick Production

Week of Production	Age (days)	Age (weeks)	Hatch All Eggs (%)*	Cum. Hatchability (%)	Chicks/Week Hen-Housed	Cum. Chicks Hen-Housed
1	175	25				
2	182	26	79.6	79.6	0.73	0.73
3	189	27	81.9	81.4	2.47	3.21
4	196	28	84.0	82.7	3.80	7.00
5	203	29	86.0	84.0	4.49	11.49
6	210	30	87.7	85.1	4.84	16.33
7	217	31	88.8	85.9	4.99	21.32
8	224	32	89.8	86.6	5.05	26.37
9	231	33	90.6	87.3	5.02	31.39
10	238	34	91.1	87.8	4.98	36.37
11	245	35	91.5	88.2	4.92	41.29
12	252	36	91.7	88.6	4.86	46.15
13	259	37	91.8	88.9	4.79	50.94
14	266	38	91.8	89.1	4.71	55.65
15	273	39	91.6	89.3	4.63	60.28
16	280	40	91.3	89.4	4.53	64.81
17	287	41	91.1	89.5	4.45	69.26
18	294	42	90.7	89.6	4.36	73.61
19	301	43	90.3	89.7	4.26	77.88
20	308	44	89.7	89.7	4.16	82.04
21	315	45	89.1	89.6	4.06	86.10
22	322	46	88.5	89.6	3.96	90.07
23	329	47	87.9	89.5	3.87	93.93
24	336	48	86.9	89.4	3.74	97.68
25	343	49	85.9	89.3	3.63	101.31
26	350	50	85.0	89.1	3.53	104.84
27	357	51	84.0	89.0	3.42	108.25
28	364	52	83.0	88.8	3.31	111.56
29	371	53	82.0	88.5	3.21	114.77
30	378	54	81.0	88.3	3.10	117.87
31	385	55	80.1	88.0	3.00	120.88
32	392	56	79.1	87.9	2.89	123.77
33	399	57	78.0	87.6	2.79	126.56
34	406	58	77.0	87.4	2.70	129.26
35	413	59	76.0	87.1	2.60	131.86
36	420	60	74.9	86.9	2.50	134.36
37	427	61	73.9	86.6	2.41	136.78
38	434	62	73.0	86.3	2.32	139.10
39	441	63	71.7	86.0	2.23	141.33
40	448	64	70.4	85.8	2.13	143.45

NOTES

* Hatchability is based on an average egg age of 3 days. Hatchability will drop by 0.5% per day of storage between 7 and 11 days.

Weekly Egg Weight and Egg Mass

Week of Production	Age (days)	Age (weeks)	Hen-Week (%)	Egg Weight (g)	Egg Mass* (g)	Egg Weight (oz/dozen)
1	175	25	5.4	49.4	2.7	20.9
2	182	26	18.9	51.2	9.7	21.7
3	189	27	49.2	52.8	26.0	22.3
4	196	28	70.9	54.6	38.7	23.1
5	203	29	79.7	55.7	44.4	23.6
6	210	30	82.7	57.0	47.1	24.1
7	217	31	83.6	58.1	48.6	24.6
8	224	32	83.0	58.9	48.9	24.9
9	231	33	82.0	59.7	49.0	25.3
10	238	34	81.0	60.4	48.9	25.6
11	245	35	80.0	60.9	48.7	25.8
12	252	36	79.0	61.4	48.5	26.0
13	259	37	78.0	61.9	48.3	26.2
14	266	38	77.0	62.3	48.0	26.4
15	273	39	76.0	62.7	47.7	26.5
16	280	40	74.8	63.0	47.1	26.7
17	287	41	73.8	63.4	46.8	26.8
18	294	42	72.8	63.7	46.4	27.0
19	301	43	71.7	64.1	46.0	27.1
20	308	44	70.7	64.4	45.5	27.3
21	315	45	69.6	64.8	45.1	27.4
22	322	46	68.6	65.1	44.7	27.6
23	329	47	67.5	65.4	44.1	27.7
24	336	48	66.3	65.8	43.6	27.8
25	343	49	65.3	66.1	43.2	28.0
26	350	50	64.2	66.5	42.7	28.1
27	357	51	63.1	66.8	42.2	28.3
28	364	52	62.0	67.2	41.7	28.4
29	371	53	61.0	67.5	41.2	28.6
30	378	54	59.9	67.8	40.6	28.7
31	385	55	58.8	68.1	40.0	28.8
32	392	56	57.5	68.4	39.3	28.9
33	399	57	56.4	68.7	38.7	29.1
34	406	58	55.3	68.9	38.1	29.2
35	413	59	54.2	69.1	37.5	29.2
36	420	60	53.1	69.3	36.8	29.3
37	427	61	52.0	69.4	36.1	29.4
38	434	62	50.9	69.5	35.4	29.4
39	441	63	49.7	69.6	34.6	29.5
40	448	64	48.4	69.7	33.7	29.5

KEY
 (kg/g) – metric measurement
 (lb/oz) – imperial measurement

NOTE
 * Egg mass (g) = $\frac{\text{Hen-week (\%)} \times \text{Egg weight (g)}}{100}$

Notes

A series of horizontal dotted lines for taking notes.



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