

EUROPEAN PARENT 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

The performance objectives included here are reflective of the economic drivers and stocking densities typical of parent stock production operations within Europe which influence flock cycle planning and management techniques. This typically involves adopting a breeder management strategy which provides first light increase at or before 21 weeks of age (up to 146 days of age).

Performance can be influenced by many factors including flock management, health status and climatic conditions. These objectives indicate the performance which can be achieved under good management and environmental conditions and when feeding recommended nutrient levels.

Variation in performance may occur for a variety of reasons. For example, feed consumption can be affected by form of feed, energy level and house temperature. Information in this booklet should not be regarded as a specification but as a 'Performance Objective.'

Performance levels given assume flocks are managed with separate-sex feeding.

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.

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Performance Summary

European Ross 708 breeder performance objectives for birds light stimulated **at** or **before** 21 weeks of age (up to 146 days of age).

Summary of 40 Weeks of Production

Age at depletion (days)	434
(weeks)	62
Total eggs (HH)	177.4
Hatching eggs (HH)	169.1
Chicks / female housed at 161 days (23 weeks)	141.5
Age at 5% production (days)	161
(weeks)	23
Hatchability (%)	83.7
Peak Production (%)	85.8
Body weight at 161 days (23 weeks)	2770 g
Body weight at depletion	4100 g
Liveability (%) (Rearing period)	95 - 96
Liveability (%) (Laying period)	92
Feed / 100 chicks* day old - 434 days (0 - 62 weeks)	37.9 kg
Feed / 100 hatching eggs* day old - 434 days (0 - 62 weeks)	31.7 kg

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

ROSS 708 PARENT STOCK: Performance Objectives

Male Body Weight and Feeding Program

Age (days)	Age (weeks)	Body weight (g)	Weekly gain (g)	Feed (g/bird/day)	Energy (kcal ME/bird/day)*
Day old	0	40		ad lib	ad lib
7	1	150	110	29	81
14	2	310	160	38	106
21	3	505	195	46	129
28	4	720	215	54	152
35	5	900	180	62	174
42	6	1075	175	70	182
49	7	1230	155	73	190
56	8	1375	145	75	195
63	9	1510	135	77	201
70	10	1640	130	79	205
77	11	1770	130	81	210
84	12	1900	130	83	215
91	13	2030	130	85	220
98	14	2160	130	86	224
105	15	2290	130	88	229
112	16	2430	140	90	243
119	17	2575	145	92	248
126	18	2725	150	94	253
133	19	2880	155	96	259
140	20	3035	155	98	264
147	21	3195	160	101	273
154	22	3345	150	103	278
161	23	3490	145	105	284
168	24	3630	140	108	292
175	25	3750	120	111	299
182	26	3860	110	113	306
189	27	3920	60	116	312
196	28	3970	50	117	315
203	29	4010	40	118	319
210	30	4040	30	120	324
217	31	4070	30	122	329
224	32	4100	30	123	333
231	33	4130	30	125	337
238	34	4160	30	126	340
245	35	4190	30	127	344
252	36	4220	30	129	348
259	37	4250	30	130	351
266	38	4280	30	131	354
273	39	4310	30	133	359
280	40	4340	30	134	362
287	41	4370	30	136	366
294	42	4400	30	137	369
301	43	4430	30	138	372
308	44	4460	30	139	375
315	45	4490	30	140	378
322	46	4524	34	141	380
329	47	4558	34	142	383
336	48	4592	34	143	386
343	49	4626	34	144	388
350	50	4660	34	145	391
357	51	4694	34	146	393
364	52	4728	34	146	395
371	53	4762	34	147	397
378	54	4796	34	148	399
385	55	4830	34	149	402
392	56	4864	34	150	404
399	57	4898	34	150	406
406	58	4932	34	151	407
413	59	4966	34	151	408
420	60	5000	34	151	409
427	61	5034	34	152	410
434	62	5068	34	152	411

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 30-34 g.

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.

*Feed quantities are a guide only, based on recommended dietary energy levels of a 4-stage rearing program and a male diet in lay. Adjustments must be made to reflect feeding differing energy levels.

ROSS 708 PARENT STOCK: Performance Objectives

Female Body Weight and Feeding Program

Age (days)	Age (weeks)	Body weight (g)	Weekly gain (g)	Feed (g/bird/day)	ME intake (kcal/bird/day)*
Day old	0	40		ad lib	ad lib
7	1	125	85	25	70
14	2	245	120	34	95
21	3	350	105	37	104
28	4	450	100	40	112
35	5	550	100	43	120
42	6	650	100	47	122
49	7	750	100	50	130
56	8	850	100	52	135
63	9	950	100	54	140
70	10	1050	100	56	146
77	11	1150	100	58	151
84	12	1250	100	61	159
91	13	1350	100	64	166
98	14	1450	100	67	174
105	15	1555	105	71	185
112	16	1670	115	74	200
119	17	1790	120	80	216
126	18	1930	140	85	230
133	19	2075	145	92	248
140	20	2230	155	100	270
147	21	2400	170	108	292
154	22	2585	185	116	313
161	23	2770	185	125	350
168	24	2960	190	135	378
175	25	3060	100	154	430
182	26	3160	100	159	445
189	27	3260	100	162	453
196	28	3340	80	162	453
203	29	3400	60	162	453
210	30	3460	60	162	453
217	31	3480	20	162	453
224	32	3500	20	162	453
231	33	3520	20	162	453
238	34	3540	20	161	452
245	35	3560	20	161	451
252	36	3580	20	161	450
259	37	3600	20	160	449
266	38	3620	20	160	448
273	39	3640	20	160	447
280	40	3660	20	159	446
287	41	3680	20	159	445
294	42	3700	20	159	444
301	43	3720	20	158	443
308	44	3740	20	158	442
315	45	3760	20	158	441
322	46	3780	20	157	440
329	47	3800	20	157	439
336	48	3820	20	156	438
343	49	3840	20	156	437
350	50	3860	20	156	436
357	51	3880	20	155	435
364	52	3900	20	155	434
371	53	3920	20	155	433
378	54	3940	20	154	432
385	55	3960	20	154	431
392	56	3980	20	154	430
399	57	4000	20	153	429
406	58	4020	20	153	428
413	59	4040	20	153	427
420	60	4060	20	152	426
427	61	4080	20	152	426
434	62	4100	20	152	426

NOTES:

Body weights are those 4-6 hours after feeding.

Weekly body-weight gain beyond 30 weeks (210 days) should average approximately 20 g.

*Feed quantities are a guide only, based on recommended dietary energy levels of a 4-stage rearing program. Adjustments must be made to reflect feeding differing energy levels.

Feeding into Lay

Hen-day (%)	Daily energy intake (kcal/bird/day)	Feed intake (g/bird/day)	Feed increase (g/bird/day)
5	350	125	
10	356	127	2
15	364	130	3
20	370	132	2
25	378	135	3
30	384	137	2
35	392	140	3
40	398	142	2
45	406	145	3
50	412	147	2
55	420	150	3
60	426	152	2
65	434	155	3
70	445	159	4
peak	453	162	3

NOTES:

Daily energy and feed intakes are based on current recommended dietary levels of energy and assuming an ambient temperature of 20 - 21°C.

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.

Female Parent Stock Nutrient Allocations at Peak Production

Nutrient	Nutrient Allocation at Peak
Energy	453
DIGESTIBLE AMINO ACIDS mg/bird/day	
Lysine	972
Methionine + Cystine	956
Methionine	599
Threonine	794
Valine	907
Isoleucine	810
Arginine	1280
Tryptophan	227
MINERALS mg/bird/day	
Calcium	4860
Available Phosphorus	567

ROSS 708 PARENT STOCK: Performance Objectives

Weekly Egg Production

Week of production	Age (days)	Age (weeks)	Hen-housed (%)	Hen-week (%)	Eggs/ birds/week	Eggs/ bird/cum.	Hatching eggs/bird/ week*	Hatching eggs/birds/ cum.	Hatching egg utilization weekly	Hatching egg utilization cum.
1	161	23	5.4	5.4	0.4	0.4				
2	168	24	16.3	16.3	1.1	1.5	0.9	0.9	60.0	54.4
3	175	25	43.5	43.6	3.0	4.6	2.2	3.1	73.0	67.6
4	182	26	69.5	70.0	4.9	9.5	4.3	7.4	88.0	78.4
5	189	27	81.8	82.5	5.7	15.2	5.2	12.6	91.0	83.3
6	196	28	85.4	86.3	6.0	21.2	5.6	18.2	93.0	86.0
7	203	29	85.8	86.8	6.0	27.2	5.6	23.8	94.0	87.8
8	210	30	84.8	86.0	5.9	33.1	5.7	29.5	96.0	89.3
9	217	31	83.6	84.9	5.8	38.9	5.6	35.1	96.0	90.3
10	224	32	82.3	83.8	5.8	44.7	5.6	40.7	97.0	91.2
11	231	33	81.1	82.7	5.7	50.4	5.5	46.2	97.0	91.9
12	238	34	79.9	81.7	5.6	56.0	5.4	51.7	97.0	92.4
13	245	35	78.6	80.6	5.5	61.5	5.3	57.0	97.0	92.8
14	252	36	77.4	79.5	5.4	66.9	5.3	62.3	97.0	93.1
15	259	37	76.1	78.3	5.3	72.2	5.2	67.4	97.0	93.4
16	266	38	74.9	77.2	5.2	77.5	5.1	72.5	97.0	93.7
17	273	39	73.7	76.1	5.2	82.6	5.0	77.5	97.0	93.9
18	280	40	72.4	75.0	5.1	87.7	4.9	82.4	96.8	94.1
19	287	41	71.2	73.9	5.0	92.7	4.8	87.3	96.8	94.2
20	294	42	70.0	72.7	4.9	97.6	4.7	92.0	96.8	94.3
21	301	43	68.7	71.6	4.8	102.4	4.7	96.7	96.8	94.5
22	308	44	67.5	70.5	4.7	107.1	4.6	101.2	96.8	94.6
23	315	45	66.3	69.3	4.6	111.8	4.5	105.7	96.8	94.7
24	322	46	65.0	68.2	4.6	116.3	4.4	110.1	96.8	94.7
25	329	47	63.8	67.0	4.5	120.8	4.3	114.5	96.8	94.8
26	336	48	62.6	65.8	4.4	125.2	4.2	118.7	96.8	94.9
27	343	49	61.3	64.7	4.3	129.4	4.2	122.9	96.8	95.0
28	350	50	60.1	63.5	4.2	133.7	4.1	126.9	96.8	95.0
29	357	51	58.8	62.3	4.1	137.8	4.0	130.9	96.8	95.1
30	364	52	57.6	61.2	4.0	141.8	3.9	134.8	96.6	95.1
31	371	53	56.4	60.0	3.9	145.8	3.8	138.6	96.6	95.1
32	378	54	55.1	58.8	3.9	149.6	3.7	142.3	96.6	95.2
33	385	55	53.9	57.6	3.8	153.4	3.6	146.0	96.4	95.2
34	392	56	52.7	56.4	3.7	157.1	3.6	149.5	96.4	95.2
35	399	57	51.4	55.2	3.6	160.7	3.5	153.0	96.4	95.3
36	406	58	50.2	54.0	3.5	164.2	3.4	156.4	96.4	95.3
37	413	59	49.0	52.8	3.4	167.6	3.3	159.7	96.4	95.3
38	420	60	47.7	51.5	3.3	171.0	3.2	162.9	96.4	95.3
39	427	61	46.5	50.3	3.3	174.2	3.1	166.0	96.4	95.3
40	434	62	45.0	48.8	3.2	177.4	3.0	169.1	96.4	95.3

*A hatching egg is considered to be an egg which is 50 g or heavier.

ROSS 708 PARENT STOCK: Performance Objectives

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	161	23				
2	168	24	72.0	72.0	0.7	0.7
3	175	25	72.0	74.7	1.6	2.3
4	182	26	79.0	77.3	3.4	5.7
5	189	27	82.0	79.0	4.3	10.0
6	196	28	83.5	80.4	4.6	14.6
7	203	29	85.4	81.6	4.8	19.4
8	210	30	86.9	82.6	5.0	24.4
9	217	31	87.9	83.5	5.0	29.3
10	224	32	88.9	84.2	4.9	34.3
11	231	33	89.2	84.8	4.9	39.2
12	238	34	89.5	85.3	4.9	44.1
13	245	35	89.8	85.8	4.8	48.9
14	252	36	89.9	86.1	4.7	53.6
15	259	37	89.6	86.4	4.6	58.2
16	266	38	89.2	86.6	4.5	62.8
17	273	39	88.8	86.7	4.4	67.2
18	280	40	88.4	86.8	4.3	71.5
19	287	41	88.0	86.9	4.2	75.8
20	294	42	87.6	86.9	4.2	79.9
21	301	43	87.2	86.9	4.1	84.0
22	308	44	86.7	86.9	4.0	88.0
23	315	45	86.2	86.9	3.9	91.8
24	322	46	85.7	86.8	3.8	95.6
25	329	47	85.0	86.8	3.7	99.3
26	336	48	84.3	86.7	3.6	102.9
27	343	49	83.3	86.6	3.5	106.3
28	350	50	82.4	86.4	3.4	109.7
29	357	51	81.2	86.3	3.2	112.9
30	364	52	80.1	86.1	3.1	116.0
31	371	53	79.0	85.9	3.0	119.1
32	378	54	77.9	85.7	2.9	122.0
33	385	55	76.8	85.5	2.8	124.7
34	392	56	75.7	85.2	2.7	127.4
35	399	57	74.6	85.0	2.6	130.0
36	406	58	73.6	84.7	2.5	132.5
37	413	59	72.6	84.5	2.4	134.9
38	420	60	71.6	84.2	2.3	137.2
39	427	61	70.3	83.9	2.2	139.4
40	434	62	69.1	83.7	2.1	141.5

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.

ROSS 708 PARENT STOCK: Performance Objectives

Weekly Egg Weight and Egg Mass

Week of production	Age (days)	Age (weeks)	Hen-week (%)	Egg weight	Egg mass*
1	161	23	1.7	47.8	0.8
2	168	24	16.3	50.0	8.2
3	175	25	43.6	51.2	22.3
4	182	26	70.0	52.6	36.8
5	189	27	82.5	53.9	44.5
6	196	28	86.3	55.1	47.6
7	203	29	86.8	56.1	48.7
8	210	30	86.0	57.2	49.2
9	217	31	84.9	58.1	49.3
10	224	32	83.8	58.9	49.4
11	231	33	82.7	59.7	49.4
12	238	34	81.7	60.4	49.3
13	245	35	80.6	60.9	49.1
14	252	36	79.5	61.4	48.8
15	259	37	78.3	61.9	48.5
16	266	38	77.2	62.3	48.1
17	273	39	76.1	62.7	47.7
18	280	40	75.0	63.0	47.2
19	287	41	73.9	63.4	46.8
20	294	42	72.7	63.7	46.3
21	301	43	71.6	64.1	45.9
22	308	44	70.5	64.4	45.4
23	315	45	69.3	64.8	44.9
24	322	46	68.2	65.1	44.4
25	329	47	67.0	65.4	43.8
26	336	48	65.8	65.8	43.3
27	343	49	64.7	66.1	42.8
28	350	50	63.5	66.5	42.2
29	357	51	62.3	66.8	41.6
30	364	52	61.2	67.2	41.1
31	371	53	60.0	67.5	40.5
32	378	54	58.8	67.8	39.9
33	385	55	57.6	68.1	39.2
34	392	56	56.4	68.4	38.6
35	399	57	55.2	68.7	37.9
36	406	58	54.0	68.9	37.2
37	413	59	52.8	69.1	36.5
38	420	60	51.5	69.3	35.7
39	427	61	50.3	69.6	35.0
40	434	62	48.8	70.0	34.2

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

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