PARENT STOCK

ROSS PM3

Performance Objectives

2016

ROSS
An Aviagen Brand

Introduction

This booklet contains the performance objectives for the Ross® PM3 parent stock and should be used in conjunction with the **Ross Parent Stock Management Handbook** and the **Ross PM3 Management Supplement**.

Performance

The performance objectives included here are for a breeder management strategy which provides first light increase at or before 21 weeks of age (up to 146 days of age) with the objective to achieve 5% production at 23 weeks 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 PM3 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) (weeks)	434 62
Total eggs (HH)	180.1
Hatching eggs (HH)	171.7
Chicks / female housed at 161 days (23 weeks)	141.4
Hatchability (%)	82.3
Age at 5% production (days) (weeks)	161 23
Peak production (%)	85.7
Body weight at 161 days (23 weeks)	2308 g
Body weight at depletion	3317 g
Liveability (%) (Rearing period)	95 - 96
Liveability (%) (Laying period)	92
Feed / 100 chicks* day old - 434 days (0 - 62 weeks)	34.8 kg
Feed / 100 hatching eggs* day old - 434 days (0 - 62 weeks)	28.7 kg

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

Male Body Weight and Feeding Programme

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	31	87
14	2	310	160	40	112
21	3	510	200	49	137
28	4	720	210	57	160
35	5	900	180	63	177
42	6	1080	180	71	185
49	7	1230	150	73	190
56	8	1380	150	75	195
63	9	1510	130	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	2580	150	92	248
126	18	2730	150	94	253
133	19	2880	150	96	259
140	20	3040	160	98	264
147	21	3200	160	101	273
154	22	3350	150	103	278
161	23	3490	140	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	119	322
217	31	4060	20	120	324
224	32	4080	20	121	327
231	33	4100	20	123	332
238	34	4120	20	124	335
245	35	4140	20	125	338
252	36	4160	20	127	342
259	37	4180	20	128	346
266	38	4200	20	130	350
273	39	4220	20	131	353
280	40	4240	20	132	356
287	41	4265	25	133	359
294	42	4290	25	134	362
301	43	4315	25	135	365
308	44	4340	25	136	368
315	45	4365	25	137	371
322	46	4390	25	138	373
329	47	4415	25	139	376
336	48	4440	25	140	379
343	49	4465	25	141	381
350	50	4490	25	142	383
357	51	4520	30	143	386
364	52	4550	30	144	388
371	53	4580	30	144	390
378	54	4610	30	145	392
385	55	4640	30	146	394
392	56	4670	30	147	396
399	57	4700	30	147	398
406	58	4730	30	148	399
413	59	4760	30	148	400
420	60	4790	30	149	401
427	61	4820	30	149	402
434	62	4850	30	149	403

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 20-30 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 PM3 PARENT STOCK: Performance Objectives

Female Body Weight and Feeding Programme

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	24	67
14	2	240	115	33	92
21	3	360	120	38	106
28	4	480	120	43	120
35	5	600	120	45	126
42	6	740	140	50	130
49	7	855	115	52	135
56	8	964	109	54	140
63	9	1053	89	56	146
70	10	1132	79	58	151
77	11	1207	75	60	156
84	12	1282	75	62	161
91	13	1357	75	64	166
98	14	1432	75	66	172
105	15	1507	75	69	179
112	16	1582	75	72	194
119	17	1657	75	79	213
126	18	1734	77	84	227
133	19	1845	111	90	243
140	20	1975	130	95	257
147	21	2100	125	100	270
154	22	2208	108	106	286
161	23	2308	100	113	316
168	24	2403	95	125	350
175	25	2493	90	136	381
182	26	2578	85	142	398
189	27	2653	75	148	414
196	28	2708	55	148	414
203	29	2748	40	148	414
210	30	2773	25	148	414
217	31	2790	17	148	414
224	32	2807	17	147	412
231	33	2824	17	147	411
238	34	2841	17	146	409
245	35	2858	17	146	408
252	36	2875	17	145	407
259	37	2892	17	145	406
266	38	2909	17	145	405
273	39	2926	17	144	404
280	40	2943	17	144	403
287	41	2960	17	144	402
294	42	2977	17	143	401
301	43	2994	17	143	400
308	44	3011	17	142	399
315	45	3028	17	142	398
322	46	3045	17	142	397
329	47	3062	17	141	396
336	48	3079	17	141	395
343	49	3096	17	141	394
350	50	3113	17	140	393
357	51	3130	17	140	392
364	52	3147	17	139	390
371	53	3164	17	139	389
378	54	3181	17	139	388
385	55	3198	17	138	387
392	56	3215	17	138	386
399	57	3232	17	138	385
406	58	3249	17	137	384
413	59	3266	17	137	383
420	60	3283	17	136	382
427	61	3300	17	136	381
434	62	3317	17	136	380

NOTES:

Body weights are those 4-6 hours after feeding.

Weekly body-weight gain beyond 30 weeks (210 days) should average approximately 17 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	316	113	
10	327	117	4
15	338	121	4
20	348	124	4
25	358	128	3
30	367	131	3
35	376	134	3
40	382	137	2
45	385	138	1
50	388	139	1
55	392	140	1
60	395	141	1
65	398	142	1
70	403	144	2
peak	414	148	4

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	414
DIGESTIBLE AMINO ACIDS mg/bird/day	
Lysine	903
Methionine + Cystine	888
Methionine	562
Threonine	740
Valine	844
Isoleucine	755
Arginine	1184
Tryptophan	222
MINERALS mg/bird/day	
Calcium	5032
Available Phosphorus	577

ROSS PM3 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 utilisation weekly	Hatching egg utilisation cum.
1	161	23	5.0	5.0	0.4	0.4				
2	168	24	20.7	20.8	1.5	1.8	0.9	0.9	60.0	48.3
3	175	25	37.7	37.9	2.6	4.4	1.9	2.8	71.4	62.1
4	182	26	65.7	66.1	4.6	9.0	3.6	6.4	78.4	70.4
5	189	27	79.7	80.4	5.6	14.6	4.7	11.0	83.6	75.4
6	196	28	84.7	85.6	5.9	20.6	5.3	16.4	89.7	79.5
7	203	29	85.7	86.8	6.0	26.6	5.6	21.9	93.2	82.6
8	210	30	85.7	86.9	6.0	32.6	5.7	27.6	94.8	84.9
9	217	31	84.7	86.1	5.9	38.5	5.7	33.4	96.5	86.7
10	224	32	83.7	85.3	5.9	44.4	5.8	39.1	98.2	88.2
11	231	33	82.7	84.4	5.8	50.1	5.7	44.8	98.2	89.4
12	238	34	81.7	83.6	5.7	55.9	5.6	50.4	98.1	90.3
13	245	35	80.7	82.7	5.7	61.5	5.5	56.0	98.1	91.0
14	252	36	79.7	81.9	5.6	67.1	5.5	61.4	98.1	91.6
15	259	37	78.7	81.0	5.5	72.6	5.4	66.8	98.1	92.1
16	266	38	77.2	79.6	5.4	78.0	5.3	72.1	98.0	92.5
17	273	39	76.2	78.8	5.3	83.3	5.2	77.4	98.0	92.8
18	280	40	74.7	77.4	5.2	88.6	5.1	82.5	98.0	93.1
19	287	41	73.7	76.5	5.2	93.7	5.1	87.6	98.0	93.4
20	294	42	72.7	75.6	5.1	98.8	5.0	92.5	97.9	93.6
21	301	43	71.7	74.7	5.0	103.9	4.9	97.5	97.9	93.8
22	308	44	69.7	72.8	4.9	108.7	4.8	102.2	97.8	94.0
23	315	45	68.7	71.9	4.8	113.5	4.7	106.9	97.8	94.2
24	322	46	66.7	69.9	4.7	118.2	4.6	111.5	97.7	94.3
25	329	47	65.7	69.0	4.6	122.8	4.5	116.0	97.7	94.4
26	336	48	64.2	67.6	4.5	127.3	4.4	120.4	97.7	94.6
27	343	49	62.7	66.2	4.4	131.7	4.3	124.7	97.6	94.7
28	350	50	61.2	64.7	4.3	136.0	4.2	128.9	97.6	94.8
29	357	51	60.2	63.8	4.2	140.2	4.1	133.0	97.5	94.8
30	364	52	58.7	62.3	4.1	144.3	4.0	137.0	97.4	94.9
31	371	53	57.2	60.9	4.0	148.3	3.9	140.9	97.4	95.0
32	378	54	56.2	59.9	3.9	152.3	3.8	144.7	97.4	95.0
33	385	55	54.7	58.5	3.8	156.1	3.7	148.4	97.3	95.1
34	392	56	53.2	57.0	3.7	159.8	3.6	152.1	97.2	95.1
35	399	57	52.2	56.0	3.7	163.5	3.6	155.6	97.1	95.2
36	406	58	50.7	54.5	3.6	167.0	3.4	159.1	97.1	95.2
37	413	59	49.2	53.1	3.4	170.5	3.3	162.4	97.1	95.3
38	420	60	48.2	52.1	3.4	173.8	3.3	165.7	97.0	95.3
39	427	61	45.4	49.2	3.2	177.0	3.1	168.8	96.9	95.3
40	434	62	44.0	47.8	3.1	180.1	3.0	171.7	96.8	95.4

**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 45 g 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	161	23				
2	168	24	69.0	69.0	0.6	0.6
3	175	25	76.0	73.8	1.4	2.0
4	182	26	79.0	76.7	2.9	4.9
5	189	27	81.6	78.8	3.8	8.7
6	196	28	83.7	80.4	4.5	13.1
7	203	29	85.5	81.7	4.8	17.9
8	210	30	86.7	82.7	4.9	22.9
9	217	31	87.6	83.6	5.0	27.9
10	224	32	87.9	84.2	5.1	32.9
11	231	33	88.4	84.7	5.0	38.0
12	238	34	88.8	85.2	5.0	42.9
13	245	35	88.6	85.5	4.9	47.9
14	252	36	88.4	85.8	4.8	52.7
15	259	37	88.1	86.0	4.8	57.5
16	266	38	87.8	86.1	4.7	62.1
17	273	39	87.5	86.2	4.6	66.7
18	280	40	87.0	86.2	4.5	71.2
19	287	41	86.5	86.3	4.4	75.5
20	294	42	86.0	86.2	4.3	79.8
21	301	43	85.5	86.2	4.2	84.0
22	308	44	84.8	86.1	4.0	88.1
23	315	45	84.1	86.1	4.0	92.0
24	322	46	83.4	85.9	3.8	95.8
25	329	47	82.7	85.8	3.7	99.5
26	336	48	81.8	85.7	3.6	103.1
27	343	49	80.9	85.5	3.5	106.6
28	350	50	80.0	85.3	3.3	110.0
29	357	51	79.1	85.1	3.3	113.2
30	364	52	78.2	84.9	3.1	116.3
31	371	53	77.1	84.7	3.0	119.3
32	378	54	76.0	84.5	2.9	122.3
33	385	55	74.9	84.2	2.8	125.1
34	392	56	73.8	84.0	2.7	127.7
35	399	57	72.5	83.7	2.6	130.3
36	406	58	71.2	83.5	2.5	132.8
37	413	59	69.9	83.2	2.3	135.1
38	420	60	68.5	82.9	2.2	137.3
39	427	61	67.1	82.6	2.1	139.4
40	434	62	65.8	82.3	2.0	141.4

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	Egg mass*
1	161	23	5.0		
2	168	24	20.8	46.0	9.6
3	175	25	37.9	48.0	18.2
4	182	26	66.1	50.0	33.1
5	189	27	80.4	51.5	41.4
6	196	28	85.6	53.0	45.4
7	203	29	86.8	54.2	47.0
8	210	30	86.9	55.2	48.0
9	217	31	86.1	56.1	48.3
10	224	32	85.3	56.9	48.5
11	231	33	84.4	57.5	48.5
12	238	34	83.6	58.0	48.5
13	245	35	82.7	58.4	48.3
14	252	36	81.9	58.8	48.1
15	259	37	81.0	59.2	48.0
16	266	38	79.6	59.6	47.5
17	273	39	78.8	59.9	47.2
18	280	40	77.4	60.2	46.6
19	287	41	76.5	60.5	46.3
20	294	42	75.6	60.7	45.9
21	301	43	74.7	60.9	45.5
22	308	44	72.8	61.1	44.5
23	315	45	71.9	61.3	44.1
24	322	46	69.9	61.5	43.0
25	329	47	69.0	61.7	42.6
26	336	48	67.6	61.9	41.9
27	343	49	66.2	62.1	41.1
28	350	50	64.7	62.3	40.3
29	357	51	63.8	62.5	39.9
30	364	52	62.3	62.7	39.1
31	371	53	60.9	62.9	38.3
32	378	54	59.9	63.1	37.8
33	385	55	58.5	63.3	37.0
34	392	56	57.0	63.5	36.2
35	399	57	56.0	63.7	35.7
36	406	58	54.5	63.9	34.9
37	413	59	53.1	64.1	34.0
38	420	60	52.1	64.3	33.5
39	427	61	49.2	64.5	31.7
40	434	62	47.8	64.7	30.9

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

Notes

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Every attempt has been made to ensure the accuracy and relevance of the information presented. However, Aviagen® accepts no liability for the consequences of using the information for the management of chickens.

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

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