Cobb MX Male

Management Supplement

2027

Recommendations for U.S. & Canada

cobbgenetics.com





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Introduction

Management must meet the basic needs of the stock but also be optimized to attain the full potential of the breed. Our recommendations are based on current scientific knowledge and practical experience and reflect the genetic potential of the Cobb MX Male.

This information should be used as a guide only and adapted locally according to your own experience and infrastructure. You should be aware of any local legislation which may influence the management practices that you choose to adopt.

MX Male Characteristics

The Cobb MX male originates from a unique heritage and has a great balance between breeder and broiler performance. It has excellent leg quality, mobility and livability resulting in high fertility throughout the production cycle. These leg traits and livability are passed to broiler progeny along with enhanced feed conversion and growth.

Under normal conditions, the Cobb MX male matures rapidly after photostimulation resulting in advanced comb development. It has a large comb and becomes restricted from the female feeder shortly after mixing. It is essential to meet the nutritional requirements to maintain correct growth and body composition, which, in turn, will support a high level of mating activity.

Male Management

To obtain good fertility, develop feeding and management programs that support the development of the male reproductive system while controlling the growth rate and capacity to deposit breast muscle. The male growth profile is the most important factor correlated with flock fertility. Weigh males at least weekly from 1 to 30 weeks of age and every other week thereafter. Always handle males by both legs.

Recording growth and production including fleshing, bodyweight, feeding program, uniformity, and male ratio can help optimize performance.

- The recommended male stocking density at placement is 3.6 males/m² (3.0 ft²/male). Local legislation or animal-welfare regulations should always take precedence, and stocking densities must be adjusted accordingly.
- Apply beak conditioning in the hatchery or at the farm between 5 to 8 days of age (based on chick quality) to improve feed consumption and uniformity.
- Provide correct feed increases to achieve the weekly weight goal. Due to enhanced feed efficiency, use caution and do not overfeed especially after moving to the production house.
- Sexual synchronization with females is crucial for optimum hen house performance (fertility/hatchability).
- Weigh and handle males frequently to closely monitor fleshing and body conformation.
- After photostimulation, overweight males tend to mature quickly leading to poor sexual synchronization. This situation can cause slating of hens, mortality and floor and slat eggs. Overdeveloped males can be used as spike males.
- Using male feed can help control weekly weight gain and fleshing.

Rearing

A good start in rearing is essential for uniformity, and good organ and skeletal development. Each correlates with male fertility potential. Remove suboptimal males regularly in the early part of rearing (1 to 12 weeks of age) to maximize fertility.

For best results, rear males separately from females. Sufficient light intensity and duration must be provided to ensure the correct feed amount is consumed during brooding.

Adequate feed, water and housing equipment are paramount to establishing flock uniformity and maintaining high flock fertility. The recommended male stocking density at placement is 3.6 males/m^2 (3.0 ft^2/male). In addition to floor space, sufficient feeder space is important so all males can eat simultaneously. Rapid, even feed distribution is essential for producing a highly uniform flock.

If moving to slatted houses, males must quickly identify and access water lines to ensure body condition does not stagnate or regress after housing with females. For males to find water easily on the slats, it is important to train the males in rearing. For example, use chain feeders at a height that requires the males to jump over the troughs to get to the water lines. This will enhance mobility and enable males to jump on the slats after moving to the production house. It is crucial for males to find the water line on top of the slats when water is not available in the scratch area. In rearing, training slats can be placed under the water lines 40 to 45 cm (15.7 to 17.7 in) high, to mimic the production house and teach males to jump on a slat to access water.

Table 1

Feed Space Guidelines

Age (weeks)	Chain		Round Pan	Oval Pan	Manual Tubular
	cm	in	Birds / pan	Birds / pan	Birds / pan
0 to 4	6.0	2.5	20 to 22	23 to 25	20 to 22
5 to 8	10	4.0	14 to 16	16 to 18	14 to 16
9 to 12	14	5.5	12 to 14	12 to 14	12 to 14
13 to 21	19	7.5	10 to 12	10 to 12	10 to 12
Production	20 to 25	9 to 10	8 to 10	10 to 12	8 to 10

Body Weight Management and Uniformity

Body weight development during the first 8 weeks largely determines adult frame size. Heavy males tend to develop a large frame, therefore male weights should be kept close to standard from 4 to 16 weeks of age. To help stay on standard, separate the heaviest males at 3 to 4 weeks of age by grading. During the 4 week grading, 10% of the lightest males can be removed if there are enough males in the flock. Another grading can be done at 8 weeks, handling all males and removing suboptimal males with visual defects including crooked and bent toes, and spine, eye, or beak abnormalities. Flocks with poor uniformity at 15 to 16 weeks can be graded on breast conformation and wing resistance. Place the smallest males in a separate pen and give them supplemental feed to help improve sexual development and conformation uniformity. The goal is to have >95% of the males correctly conditioned by 20 weeks of age.

Males should never lose weight at any age. Research shows that sperm production potential is established at an early age. Males subjected to stress accompanied by a weight stall or decline in the first 15 weeks of life may lose reproductive potential.

Maintaining flock uniformity is extremely important in managing high yielding males. This includes uniformity of body weight, frame size and breast conformation or fleshing. Uniform males maintained close to the Cobb standard weight have good mobility, high mating frequency and complete matings.

Table 2

Example of Correct Testicle Development

Age (weeks)	21	22	23	24	26	28
Testes (g)	0.5	2	18	24	43	47
Body weight (g)	2860	2995	3130	3270	3520	3720
(lb)	6.30	6.60	6.90	7.20	7.75	8.20
% Testes/ Body weight	0.02%	0.06%	0.56%	0.69%	1.15%	1.19%

Transferring from Rearing to Production Houses

Use the same lighting program for Cobb MX Males and females to support sexual synchronization. Ensure that positive growth occurs in the first 4 weeks after photo stimulation when testes undergo rapid development (Table 2).

For best results, mix females with males that have similar body weights. Mating heavy males with heavy females, and light males with light females will enhance hen receptivity and mating efficiency. Heavy males with no visible defects (skeletal or leg problems) can be used for spiking while small or suboptimal males should be removed.

Monitor weights weekly and adjust feed accordingly. It is a good management practice to observe eating behavior. If males are consuming feed from the female feeder, it may be necessary to keep the male feed amount constant for several weeks and increase the female feed amount to compensate for the feed males are consuming. Please consult with Cobb technical service about alternative feeding options.

Over feeding after transfer may cause large and over-fleshed males, which will require additional energy for body weight maintenance. Males may exceed the standard body weight by consuming feed from the female feeders. If the male body weight increases too rapidly after transfer, make adjustments in feed intake to slow male weight gain. Frequent handling and flesh scoring are the best ways to evaluate males and guide the feeding program.

Sexual Synchronization with Females

Sexual synchronization between males and females is largely influenced by male body weight from 12 to 20 weeks of age and the differences in body weight between the sexes. A properly synchronized flock will have high hen receptivity and mating efficiency. To determine the correct male ratio, also consider the following:

- Weight difference between males and females at mixing.
- Body composition, frame size and maturity development between males and females at mixing.
- Genetics will impact maturation rates, temperament and activity levels among male breeds. The Cobb MX Male tends to mature at an early age. Body weight and fleshing must be strictly managed from puberty (12 weeks of age) to 20 weeks of age.

Maximizing male fertility and persistency depends on controlling the male weight from mixing to flock depletion. Generally, the body weight difference between males and females at mixing should range from 15 to 25% depending on the Cobb female used. By 30 weeks of age, when sexual activity peaks, the weight difference can be 8 to 15%.



Male to Female Ratio

Male quality is the most important factor used to determine the correct male to female ratio at mixing. Male quality evaluation should be focused on body weight, flock uniformity, and fleshing. In general, at transfer, mix 10 to 11.5 % males with females.

The male ratio can be adjusted according to the sexual maturity of the males and females and the availability of housing to hold extra males for spiking.

Other considerations include:

Female condition

If the male has matured more quickly than the female, then fewer males are needed. Excessive male weight and advanced male maturity could cause slating of young hens.

Spiking program

When spiking is performed, lower mixing ratios can be considered at photostimulation.

If male maturation is **ahead** of the female, consider the following options:

- Reduce intensity to 1 to 2 lux (0.1 to 0.2 foot candle) in rearing to delay sexual development.
- Strictly manage body weight from 12 to 20 weeks of age. If average male body weight is not on standard, adjust feeding schedule to bring the flock back to standard.
- Females can be moved 1 week before males to allow females an additional week to mature.
- Begin with a lower male ratio when mixing. Mix 8 to 9% males. Increase weekly to 10 to 11.5 %.

If male maturation is **behind** the female, consider the following options:

- Maintain 10 lux (1 foot candle) light intensity during rearing for males if they are reared separately from females, otherwise follow females' light program. Insufficient light intensity during rearing may delay maturity.
- Increase weekly body weight gain for males between 18 to 21 weeks.
- House and photostimulate males up to one week earlier than females to train them to the male feeder and accelerate maturation. This can also be done in rearing when males have their own rearing house.
- Begin with a higher male to female ratio at mixing. Start with a 12 to 13% ratio and reduce the ratio weekly, or as needed.

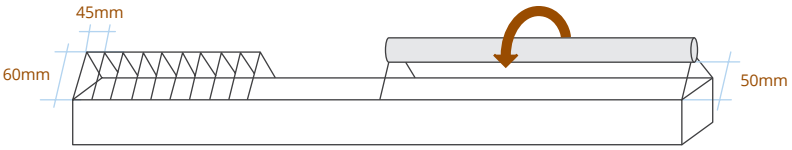
Separate Sex Feeding

Adequate feed distribution is critical for uniform growth in the production cycle. Different feeding systems should be managed to distribute a measured amount of feed per male as quickly and uniformly as possible.

It is highly recommended to use Separate Sex Feeding (SSF) in production. A typical SSF plan would include a male exclusion system placed on the female feeder (grill, roller bar, plank or wooden board) and a line of pans, troughs or tube feeders for the males.

The exclusion grill should create a vertical 60 mm (2.4 in) and horizontal 45 mm (1.8 in) restriction. With a plank or roller bar, the vertical restriction should be 50 mm (2 in). This type of system can serve a dual purpose in countries that mandate a minimal area for bird perching. The MX Male will quickly develop a large comb that will exclude him from the female feeder system by 23 to 24 weeks.

Different exclusion methods on a female track feeder.
A grill on the left and a roller bar on the right.

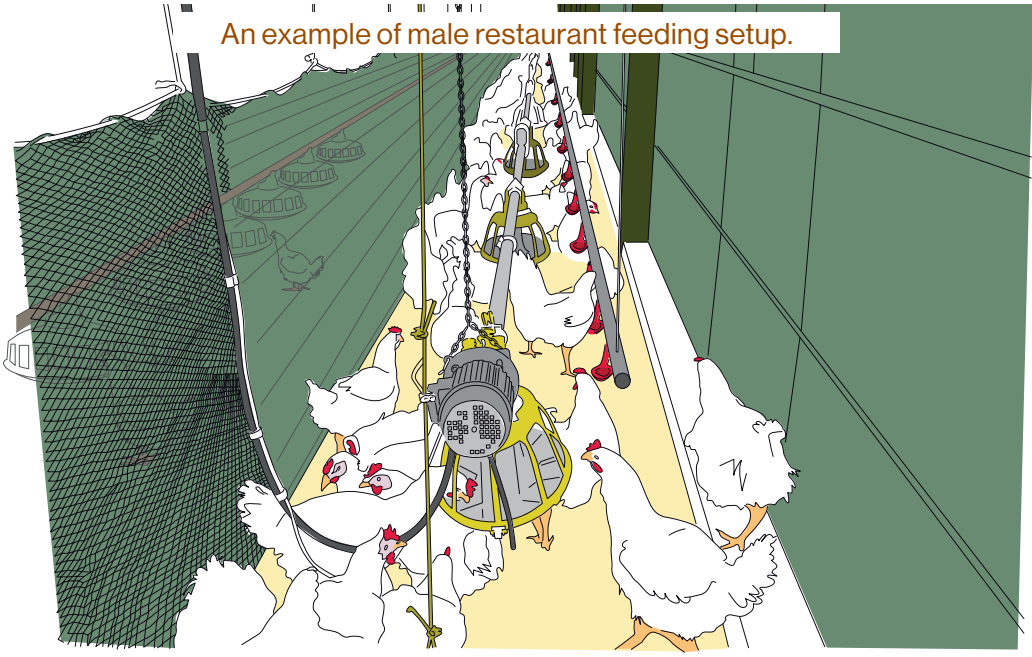


It is equally important to keep the females from eating from the male feeder. Keep the male feeder at a height that requires the males to stretch slightly while eating and prevents female access. The entire male feeder should be stable and not allowed to swing. Feeder height must be adjusted based on feeding behavior at least once a week up to 30 weeks of age. Position feeders away from other equipment that would allow females to perch and access male feeders.

Male Restaurant Feeding

Some house setups allow restaurant feeding for males to ensure they consume their feed. There are multiple ways to implement restaurant feeding. A common design is to drop a separation net during feeding to have the males eat from their own feeding systems (see illustration below). Before lifting the net (releasing the males), make sure that females have finished their feed.

It is best to incorporate a male drinker line within the restaurant area. This allows the males to drink while females are still consuming feed. If there is no drinker line in the male restaurant area, males should be released after their feed is consumed (45 to 50 minutes).



An example of male restaurant feeding setup.

Training Males for Separate Sex Feeding (SSF)

Males need to quickly identify and use their feeders. Ideally, the same type of male feeder in rearing should be used in production. In houses where pan feeders are used during rearing, training should include a mini slat (60 to 70 cm, or 2 to 2.3 ft wide) under the drinker line to help train males to jump.

The male feeder should be on a winch system so that it can be raised and refilled daily to prepare for the following day's feeding. It is essential to ensure that all pans are being used and receive the same feed quantity to provide all males with access to feed. Under normal circumstances, the female feeder is usually started first to move females to their feeder before the male feeder is lowered.

After 30 weeks, feed allocations should be modified according to weight trends. Ideally, small increases of feed should be provided to maintain a slight weight increase throughout the production period and ensure all males are receiving sufficient nutrition to sustain activity level and interest in females.





Managing Male Condition in Production

Productive males have uniform red colored combs, wattles and eye rings. Beaks should be rounded with no sharp edges that may cause injury to females or other males.

Regressing or sub-optimally conditioned males first exhibit a loss of color around the eyes. Management intervention to recover these males include separating them from the flock and providing additional feed for several days. Males that have lost all color in the comb and wattles should be removed from the flock. Testicular regression in these males is irreversible.

In addition to weight control, male conformation and fleshing should be monitored to help gauge male condition. Breast fleshing should be frequently palpated by hand with the objective of maintaining a "V" shape for as long as possible. Fleshing should cover the tip of the keel. However, the keel should still feel prominent. (See table 3 for males' optimum fleshing scores, pg 15).

Explanation of fleshing scores

FLESHING 1

Severely under conditioned breast and very thin. No wing resistance. Unacceptable male.



Not Acceptable

FLESHING 2

Thin breast from top (wing area) down. More keel bone exposed. Flaccid wing resistance.



Lean

FLESHING 2.5

V shaped breast with more fleshing in upper breast part near the wings. Stronger wing resistance and minimum condition for most males for good fertility.



Ok

FLESHING 3

More rounded breast with more breast deposition on the side of the keel. (Similar to fleshing 2.5, fleshing 3 is good and preferred for males during the production period.)



Ok

FLESHING 4

Wide breast on top (wing area) and down to end of the keel. This condition will become more noticeable after 50 weeks.



Too Heavy

FLESHING 5

Very wide breast (dimple in keel area). Severely over fleshed male for all the male lines. Fertility would be negatively affected.



Excessive

Table 3

Optimum Fleshing Score for Males

Age (weeks)	1	2	2.5	3	4	5	Fleshing Score (Weighted Average)
20		25%	50%	25%			2.50
25		15%	55%	30%			2.60
30		5%	60%	35%			2.65
35		3%	60%	35%	2%		2.70
40		1%	53%	40%	6%		2.80
45		1%	50%	40%	9%		2.85
50			45%	43%	12%		2.90
55			40%	45%	15%		2.95
60			30%	55%	15%		3.00

The pictures below show how to evaluate male fleshing. Males with prominent keels are usually scored a 2 (left), males with V shaped breast with more fleshing in upper breast are usually scored a 2.5 (middle), while males with fleshing that reaches and covers the keel on both sides are usually scored a 3 (right).

A breast conformation score between 2.5 and 3 is ideal at peak production while a small percentage of males will move to a 4 toward the end of the production period.

Unproductive males should be removed from the flock. In production, a male selection based on body weight and condition produces good male uniformity and enhanced fertility. The best results are achieved when selections are done at 25, 35, 45 and 55 weeks. This management technique may be most beneficial when spiking is not an option.







Spiking

Spiking is the addition of males into a flock to compensate for the decline in fertility. The decline can be due to decreased mating interest (natural post 35 to 40 weeks of age), reduced sperm quality (natural post 55 weeks), diminished mating efficiency (males with physical conditions such as weight or leg and feet disorders) and excessive male mortality reducing the male to female ratio.

Types of rearing for spiking programs:

- Extra males are moved to a separate house/farm at transfer and held until moved to flocks. Alternatively, the males are housed with the flock, but held in a separate pen until used to spike that flock.
- Designated houses are used to raise spike males. When using a separate spike male rearing farm, the number of primary males placed at day-old can be reduced to 10 to 11.5%.

Spike flocks back to 10 to 11.5% when the male ratio goes below 9%. Spike with a minimum of 20 % spike males to increase the ratio back to 10 to 11.5%. Spiking with an insufficient number of males is generally ineffective as primary male dominance can cause high mortality of spiking males.

Spike males should be good quality and free of physical defects. It is common to increase body weight standards for males if spiking programs are used. Males must be at least 25 weeks of age with a minimum weight of 4.1 kg (9 lb) and sexually mature. Body weights of spike and primary males should be as close as possible to ensure a high success rate.

Regularly remove suboptimal primary males to accurately determine the remaining male ratio.

A slight feed increase for males right after spiking (2 to 3 g/bird/day, or 0.45 to 0.65 lb/100 birds/day) could be beneficial since spiking significantly increases male mating activity.

Flock data indicates that having a spiking program in place prior to a fertility decrease, produces the best results. Many times, historical flock data can help guide when a flock should be spiked. For optimal results, spike the flock between 35 and 40 weeks of age. Spiking once in the life of the flock is normally sufficient. Flocks spiked twice with 8 to 10 weeks between spiking, also produce good results. Spiking is usually not economical beyond 55 weeks of age.

One of the greatest risks with a spiking program is the possibility of introducing disease or parasites into the spiked flock. Spike males should come from a single source flock. The source flock should be tested 5 to 7 days before moving. Moves should be postponed for any positive or suspect results.

Intra-Spiking

With intra-spiking, 25 to 30% of primary males are exchanged between houses from the same farm, to stimulate mating activity. Intra-spiking improves fertility when done relatively early in production (<45 weeks) and two intra-spikings, done at 40 and 48 weeks of age, can produce better results. Intra-spiking is inexpensive, easy-to-practice, and most importantly, rarely presents a biosecurity risk.

Body Weight and Feed Guide in Rearing						
Age		Body Weight*		Nutrient Intake (/bird/day) †		
Days	Weeks	g	lb	Energy (kcal)	Protein (g)	dig. Lys (mg)
7	1	150	0.33	68	4.7	228
14	2	350	0.77	97	6.6	323
21	3	545	1.20	128	8.8	428
28	4	725	1.60	151	10.3	504
35	5	840	1.85	159	8.3	354
42	6	955	2.10	164	8.5	366
49	7	1065	2.35	167	8.7	372
56	8	1205	2.65	169	8.8	378
63	9	1340	2.95	172	9.0	384
70	10	1455	3.20	175	9.1	390
77	11	1565	3.45	180	9.4	402
84	12	1700	3.75	183	9.5	408
91	13	1815	4.00	191	9.9	426
98	14	1930	4.25	199	10.4	444
105	15	2045	4.50	204	10.6	456
112	16	2155	4.75	220	11.3	468
119	17	2290	5.05	231	11.9	492
126	18	2430	5.35	243	12.5	516
133	19	2565	5.65	259	13.3	552
140	20	2700	5.95	271	13.9	576
147	21	2860	6.30	282	14.5	600
154	22 ‡	2995	6.60	296	15.2	630
161	23	3130	6.90	307	15.8	654

*Weights correspond to the weekly age based on the placement or hatch date.

† Nutrient requirements are determined by growth models combined with field data from the best performing Cobb flocks. Values in rearing are based on feeding female feed and may vary based on female breed, nutrition formulation and feeding program.

‡ First wet body weight or with feed in the crop is at 22 weeks.

Body Weight and Feed Guide in Production						
Age		Weight		Nutrient Intake (/bird/day)		
Days	Weeks	g	lb	Energy (kcal)	Protein (g)	dig. Lys (mg)
168	24	3270	7.20	317	16.0	693
175	25	3405	7.50	323	16.2	706
182	26	3520	7.75	328	16.5	718
189	27	3630	8.00	331	16.7	725
196	28	3720	8.20	340	15.1	567
203	29	3815	8.40	343	15.2	572
210	30	3900	8.59	346	15.4	576
217	31	3955	8.71	348	15.5	581
224	32	3995	8.80	351	15.6	585
231	33	4020	8.86	354	15.7	590
238	34	4040	8.90	356	15.8	594
245	35	4065	8.95	359	16.0	599
252	36	4085	9.00	362	16.1	603
259	37	4110	9.05	365	16.2	608
266	38	4130	9.10	365	16.2	608
273	39	4155	9.15	367	16.3	612
280	40	4175	9.20	367	16.3	612
287	41	4200	9.25	370	16.4	617
294	42	4220	9.30	370	16.4	617
301	43	4245	9.35	370	16.4	617
308	44	4265	9.40	373	16.6	621
315	45	4290	9.45	373	16.6	621
322	46	4310	9.50	375	16.7	626
329	47	4335	9.55	375	16.7	626
336	48	4360	9.60	378	16.8	630
343	49	4380	9.65	378	16.8	630
350	50	4405	9.70	381	16.9	635
357	51	4425	9.75	381	16.9	635
364	52	4450	9.80	383	17.0	639
371	53	4470	9.85	383	17.0	639
378	54	4495	9.90	386	17.2	644
385	55	4515	9.95	386	17.2	644
392	56	4540	10.00	389	17.3	648
399	57	4555	10.04	389	17.3	648
406	58	4575	10.08	392	17.4	653
413	59	4595	10.12	392	17.4	653
420	60	4610	10.16	394	17.5	657
427	61	4630	10.20	394	17.5	657
434	62	4650	10.24	397	17.6	662
441	63	4665	10.28	397	17.6	662
448	64	4685	10.32	400	17.8	666
455	65	4705	10.36	400	17.8	666

Recommended Nutrient Levels for Cobb MX Male

Nutrient	Unit	Inclusion Level
Metabolizable Energy	MJ/kg	11.30
	kcal/kg	2700
	kcal/lb	1225
Crude Protein	%	12.0
Calcium	%	0.95
Av. Phosphorus	%	0.42
Sodium	%	0.17 to 0.24
Chloride	%	0.17 to 0.24
Potassium	%	0.60
Linoleic Acid	%	1.40

Digestible Amino Acid	Unit	Digestible Amino Acids to Achieve Balanced Protein	Recommended Digestible Amino Acid Levels Based on Amino Acid / Lysine Ratios
Lysine	%	0.45	100
Methionine	%	0.25	56
M+C	%	0.65	145
Tryptophan	%	0.14	30
Threonine	%	0.38	85
Arginine	%	0.63	140
Valine	%	0.46	103
Isoleucine	%	0.37	82
Leucine	%	0.63	140
Histidine	%	0.20	45

Supplementary Vitamins and Trace Elements

Recommended Supplementary Levels of Vitamins and Trace Elements

Nutrients	Unit	Per kg	Per lb
Added Vitamins in Finished Feed			
Vit. A (Maize Diets)	IU	11,600	5,273
Vit. A (Wheat Diets)	IU	12,400	5,636
Vit. D3	IU	3,840	1,745
Vit. E	IU	96	44
Vit. K	mg	6.4	2.9
Thiamine (B1)	mg	4.0	1.8
Riboflavin (B2)	mg	14.4	6.5
Pantothenic Acid	mg	17.6	8.0
Niacin	mg	48	21.8
Pyridoxine (B6)	mg	5.6	2.5
Folic Acid	mg	3.2	1.5
Vit. B12	mg	0.05	0.022
Biotin (Maize Diets)	mg	0.40	0.18
Biotin (Wheat Diets)	mg	0.48	0.22
Added Minerals in Finished Feed			
Manganese	mg	120	55
Zinc	mg	120	55
Iron	mg	40 to 60	18 to 27
Copper	mg	14 to 20	7 to 10
Iodine	mg	2.5	1.14
Selenium	ppm	0.3	0.14
Suggested Minimum Inclusion in Finished Feed			
Choline	mg	1400	636
Linoleic acid	%	2.0	0.91

IU = International units

Supplementary levels of vitamins and trace elements should always be reviewed to ensure total levels do not exceed those set in local legislation.

Inclusion levels for trace minerals are based on formulations with inorganic forms. If using organic or chelated minerals, please contact the supplier for inclusion value adjustments.



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