

NUTRIENT REQUIREMENTS FOR LAYING HENS

For Birds Consuming 115 g of feed/day

	Intake/hen/day	As % of Diet
Protein (g)	18.0 (g)	16.0 %
M E (MJ)	1.34 (MJ)	11.73 MJ/kg
Methionine (mg)	300 (mg)	0.26 %
Methionine & cystine (mg)	550 (mg)	0.48 %
Tryptophan (mg)	170 (mg)	0.15 %
Lysine (mg)	800 (mg)	0.70 %
Calcium (g)	3.5 (g)	3.00 %
Phosphorus (total) (mg)	690 (mg)	0.60 %
Phosphorus (av.) (mg)	460 (mg)	0.40 %
Linoleic acid (g)	1.7 (g)	1.50 %
Sodium (mg)	160 (mg)	0.15 %

VITAMIN - MINERAL ALLOWANCES FOR LAYERS

<u>Vitamins</u>	<u>Per tonne of Feed</u>
Vitamin A	7,500,000 I.U.
Vitamin D ₃	1,500,000 I.U.
Vitamin E	10.0 grams
Vitamin K	2.0 grams
Thiamin	1.0 gram
Riboflavin	6.0 grams
Pantothenic acid	8.25 grams
Niacin	30.0 grams
Pyridoxine	4.0 grams
Folic Acid	0.3 grams
Biotin	0.05 grams
Vitamin B ₁₂	0.01 grams
Ascorbic ¹ acid	?
Choline Chloride ²	500.00 grams
<u>Minerals</u>	
Iron	50.00 grams
Manganese	60.00 grams
Zinc	50.00 grams
Copper	4.00 grams
Iodine	0.40 grams
Molybdenum	0.50 grams
<u>Anti oxidant</u>	
Ethoxyquin ³	125.00 grams

Notes:

1. During periods of stress e.g. beak trimming, respiratory disease, heat, etc. it would be beneficial to include 50-100g of ascorbic acid per tonne of feed.
2. Choline chloride (50%) - wet material should be added separately to the feed and should not be included in premixes that are to be stored for a period of time.
3. The inclusion of an antioxidant in the premix is optional. However, if an antioxidant is not included either in the premix or in the feed, then the level of Vitamin E in the premix should be increased to 20 grams.

Vitamin Premix for Layers

	Amount/tonne of feed (grams)	Approx. Costs (cents)
Vitamin A (500,000 I.U./g)	15.0	26.6
Vitamin D ₃ (500,000 I.U./g)	3.0	3.3
Vitamin E (50%) (1)	20.0	23.0
Vitamin K ₃ (51%)	4.0	6.7
Thiamin hydrochloride	1.0	3.5
Riboflavin (96%)	6.0	25.1
Niacin	30.0	23.4
Calcium pantothenate (55%)	15.0	19.4
Pyridoxine hydrochloride	4.0	15.2
Folic acid	0.3	3.7
Vitamin B ₁₂ (1%)	1.0	3.4
Biotin (Rovimix 2%)	2.5	26.3
Choline chloride (50%) (2)	1000.0	130.0
Ascorbic acid (Vitamin C) (3)	?	

Note

- (1) Vitamin E (50%) should be increased to 40 grams/tonne of feed if an antioxidant is not included in the feed.
- (2) Choline chloride (50%) should be added separately when the feed is being mixed. Do not include in premix as premixes with choline chloride (50%) do not store well.
- (3) Ascorbic acid should be included at the rate of 50 to 100 grams/tonne when the birds are under stress-such as heat, disease, beak trimming etc.

Trace Mineral Premix For Layers

	Amount/tonne of feed (grams)	Approx. Cost (cents)
Ferrous Sulphate (30%)	167	8.4
Manganese Oxide (63%)	95	6.7
Zinc Oxide (78%)	64	6.4
Copper Sulphate (25%)	16	2.4
Potassium Iodide (75%)	0.5	1.2
Sodium Molybdate (39%)	1.3	1.3
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