PARENT STOCK

ROSS 308 AP

Nutrition Specifications

2021

ROSS

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Introduction

This booklet contains the nutritional recommendations for Ross® 308 AP parent stock and is to be used with the **Ross Parent Stock Management Handbook**, the **Ross 308 AP Management Supplement** and the **Ross 308 AP Parent Stock Performance Objectives**.

Performance

To achieve optimal reproductive performance, it is important that the body-weight profiles recommended in the **Ross 308 AP Parent Stock Performance Objectives** are followed. For the nutritional recommendations that follow, nutrient specifications presented have been based upon daily energy allocations that enable body-weight profiles and reproductive performance objectives to be achieved. The Ross 308 AP female is characterized by its appetite and particular responsiveness to lysine compared to most other females, resulting in a greater need to control fleshing and favor fat reserves. Maximum limit levels for digestible lysine are presented.

The nutrient specifications recommended in this booklet include:

- **3-Stage Rearing Program -** This program comprises 3 feeds in rear and 3 feeds in lay.
- **Separate Male Feed -** only for males in production.

Please note, these nutrient specifications are based on a common dietary energy level of 2800 kcal/kg (1271 kcal/lb), which must be adapted according to local environmental conditions, ingredient quality and availability, and feeding strategies. Thus, nutrient values must be adjusted proportionally to reflect the feeding of different energy levels, which is especially important when considering digestible lysine. Feed allocations provided in the Ross 308 AP Parent Stock Performance Objectives should be adjusted proportionally to any change in the energy density. Feed volume is an important tool that can be used to lengthen feed clean-up times and prevent body-weight uniformity loss in the rearing period even when multiple grading sessions are adopted. Feeding a lower dietary energy density Pullet Grower can be achieved using a combination of diluent ingredients (some examples include wheat bran or middlings, rice mill-feed, rice, oat or soy hulls, and inert mineral clay sources such as aluminum silicates). It is crucial to closely monitor feed clean-up times to ascertain that all pullets receive their fair share of feed to maintain good body-weight uniformity.

Peak energy intake of 470 kcal/hen/day is the general recommendation for hens in the **Ross 308 AP Parent Stock Performance Objectives**, but several factors can influence the energy needs of hens in production. Some of these factors include body weight, egg mass output and season/house temperature. A feeding program with 3 diets in the laying phase is presented to optimize egg size, egg shell quality, hatchability, chick output, and quality.

It may be beneficial to use a specific diet for males during the production period. A specification for a male diet is provided in this booklet.

The energy values used in these specifications are based on assays for Metabolizable Energy (ME) published by the World's Poultry Science Association (WPSA). The values for amino acid digestibility are based on Standardized Ileal Digestibility (SID) assays.

Contents

Female Parent Stock Nutrient Specifications

3-Stage Rearing Program

		Starter	Grower	Pre-Breeder	Breeder 1	Breeder 2	Breeder 3
Age Fed	**days**	**0-28 days**	**29-133 days**	**134 days to 5% production**	**>5% production to 224 days**	**225-350 days**	**After 351 days**
Energy per kg*	**kcal**	2800	2800	2800	2800	2800	2800
	MJ	11.7	11.7	11.7	11.7	11.7	11.7
Energy per lb	**kcal**	1271	1271	1271	1271	1271	1271
DIGESTIBLE AMINO ACIDS							
Lysine (max)**	%	0.95	0.53	0.48	0.62	0.56	0.52
Methionine	%	0.45	0.36	0.34	0.38	0.35	0.34
Methionine & Cystine	%	0.82	0.62	0.59	0.62	0.56	0.52
Threonine	%	0.70	0.52	0.50	0.55	0.53	0.51
Valine	%	0.80	0.60	0.57	0.64	0.60	0.56
Tryptophan	%	0.18	0.15	0.15	0.15	0.14	0.13
Arginine	%	1.12	0.78	0.75	0.85	0.82	0.79
Leucine	%	1.20	0.84	0.79	0.95	0.90	0.86
Isoleucine	%	0.68	0.50	0.45	0.52	0.50	0.49
Histidine	%	0.40	0.28	0.22	0.30	0.28	0.26
Crude Protein (min)	**%**	**19.0**	**14.0**	**14.0**	**15.0**	**14.0**	**13.0**
MINERALS							
Calcium	%	1.05	0.92	1.50	3.00	3.20	3.40
Available Phosphorus	%	0.50	0.46	0.45	0.36	0.34	0.32
Sodium	%	0.20-0.23	0.20-0.23	0.20-0.23	0.18-0.23	0.18-0.23	0.18-0.23
Chloride	%	0.18-0.23	0.20-0.35	0.20-0.35	0.18-0.23	0.18-0.23	0.18-0.23
Potassium	%	0.60-0.90	0.60-0.90	0.60-0.90	0.70-0.90	0.65-0.90	0.60-0.90
ADDED TRACE MINERALS PER KG							
Copper	mg	16			16		
Iodine	mg	2			3		
Iron	mg	40			50		
Manganese	mg	120			120		
Selenium	mg	0.3			0.3		
Zinc	mg	120			120		
ADDED VITAMINS PER KG							
Vitamin A	IU	13000			15000		
Vitamin D3	IU	4000			5000		
Vitamin E	IU	100			130		
Vitamin K (Menadione)	mg	6			9		
Thiamin (B1)	mg	5			6		
Riboflavin (B2)	mg	15			20		
Niacin	mg	50			70		
Pantothenic Acid	mg	20			25		
Pyridoxine (B6)	mg	5			8		
Biotin	mg	0.3			0.6		
Folic Acid	mg	3			5		
Vitamin B12	mg	0.05			0.07		
MINIMUM SPECIFICATION							
Choline per kg	mg	1400			1600		
Linoleic Acid	%	1.25			2.00		

** Energy base value. Nutrients should be factored accordingly when feeding different energy values.*

*** In order to achieve the amino acid requirements without exceeding the recommended levels of digestible lysine it may be necessary to adopt more complex diets.*

NOTES: *These feed specifications should be used as a guide. They may require adjustment for local conditions, legislation and markets.*

Female Parent Stock Nutrient Specifications

Nutrient Allocations at Peak Production

Nutrient	Nutrient Allocation at Peak
Energy (kcal/bird/day)	470
Digestible Amino Acids (mg/bird/day)	
Lysine	1041
Methionine	638
Methionine & Cystine	1041
Threonine	923
Valine	1074
Tryptophan	252
Arginine	1427
Leucine	1595
Isoleucine	873
Histidine	504
Minerals (mg/bird/day)	
Calcium	5036
Available Phosphorus	604

Male Parent Stock Nutrient Specifications

Separate Diet in Production

		Male Diet
Age Fed		**After 175 days**
Energy per kg*	kcal	2800
	MJ	11.7
Energy per lb*	kcal	1271
DIGESTIBLE AMINO ACIDS		
Lysine**	%	0.35
Methionine	%	0.33
Methionine & Cystine	%	0.58
Threonine	%	0.43
Valine	%	0.47
Tryptophan	%	0.15
Arginine	%	0.68
Leucine	%	0.66
Isoleucine	%	0.41
Histidine	%	0.16
Crude Protein	%	12.0
MINERALS		
Calcium	%	0.70
Available Phosphorus	%	0.35
Sodium	%	0.18-0.20
Chloride	%	0.20-0.23
Potassium	%	0.60-0.75
ADDED TRACE MINERALS PER KG		
Copper	mg	16
Iodine	mg	2
Iron	mg	40
Manganese	mg	120
Selenium	mg	0.3
Zinc	mg	120
ADDED VITAMINS PER KG		
Vitamin A	IU	13000
Vitamin D3	IU	4000
Vitamin E	IU	100
Vitamin K (Menadione)	mg	6
Thiamin (B1)	mg	5
Riboflavin (B2)	mg	15
Niacin	mg	50
Pantothenic Acid	mg	20
Pyridoxine (B6)	mg	5
Biotin	mg	0.3
Folic Acid	mg	3
Vitamin B12	mg	0.05
MINIMUM SPECIFICATION		
Choline per kg	mg	1400
Linoleic Acid	%	1.25

** Energy base value. Nutrients should be factored accordingly when feeding different energy values.*

*** In order to achieve the amino acid requirements without exceeding the recommended levels of digestible lysine it may be necessary to adopt more complex diets.*

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April 2021