

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

South Dakota Poultry Field Day Proceedings and
Research Reports, 1969

Animal Science Reports

1969

Nutrition of Growing Pullets

C. W. Carlson

South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/sd_poultry_1969

Recommended Citation

Carlson, C. W., "Nutrition of Growing Pullets" (1969). *South Dakota Poultry Field Day Proceedings and Research Reports, 1969*. Paper 5.
http://openprairie.sdstate.edu/sd_poultry_1969/5

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Poultry Field Day Proceedings and Research Reports, 1969 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

NUTRITION OF GROWING PULLETS

C. W. Carlson

Probably less is known about the nutrient requirements of growing pullets than of any other stage in the life of the chicken. Until recently, she has just been fed what we thought were her needs and she generally did quite well on quite a wide variety of regimes. This report covers a summary of the little we know.

Table 1 contains what we recommend concerning the dietary requirements of growing pullets. In general, the data at the low end of the ranges given would be typical of a diet containing large amounts of fibrous feedstuffs, such as oat hulls; that at the higher range would be typical of what would be used under a restricted feeding and/or restricted lighting program. Frequently, something in between is used.

Pullets at our research unit are grown on the high oats diet described in Table 2. This diet is of the medium high fiber type - its chemical composition is somewhat in between the ranges shown in Table 1. This oats diet is not practical for mechanical feeders - it bridges too readily. However, with hand feeding, it produces beautifully feathered pullets that have a good capacity for feed conversion and production in the laying house. Earlier work indicated that this diet did not alter sexual maturity or subsequent egg production as compared to a corn based diet. The oats diet, although more expensive in terms of cost of producing a pullet, reduced laying house mortality and minimized our problems with cannibalism. However, retarded sexual maturity can best be obtained by light restriction and/or feed restriction. Future work here will include studies on this problem.

Table 1 -- Suggested Nutrient Levels for Growing Pullets

Nutrient	Unit	Level
M. Energy	Cal./Kg.	1500-2800
Ca	%	1.0
P	%	0.4
Salt	%	0.5
Mn	Mg./Kg.	55.0
I	Mg./Kg.	1.0
Zn	Mg./Kg.	44.0
Vit. A	I.U./Kg.	4400.0
Vit. D ₃	I.C.U./Kg.	400.0
Vit. E	I.U./Kg.	5.0
Vit. K	Mg./Kg.	1.0
Riboflavin	Mg./Kg.	4.0
Pant. Acid	Mg./Kg.	8.0
Niacin	Mg./Kg.	25.0
Vit. B ₁₂	Mg./Kg.	8.0
Choline	Mg./Kg.	1000.0
Folic Acid	Mg./Kg.	0.9
Biotin	Mcg./Kg.	75.0
Arginine	%	.7-.9
Lysine	%	.6-.8
Methionine	%	.27-.35
Cystine	%	.15-.2
Tryptophane	%	.12-.15
Glycine	%	.60-.75
Protein	%	.12-.16

Table II -- Pullet Grower Diet Used at South Dakota State University

Ingredient	%
Ground Oats	80.5
Wheat Middlings	5.5
Soybean Meal (47%)	2.0
Meat Scraps (55%)	2.0
Alfalfa Meal (17%)	2.0
Fish Meal (60%)	1.0
Dried Whey	2.0
Dicalcium Phosphate	3.0
Ground Limestone	1.5
Salt Mix	0.5
Vitamin Mix	0.5
	<u>100.0</u>
Calculated Protein (%)	13.7
Calculated Energy (M.E./Kg.)	2280.0
Calculated Ca (%)	1.6
Calculated P (%)	0.8
Calculated Methionine and Cystine (%)	0.44
Calculated Lysine (%)	0.62
Calculated Fiber (%)	9.86
Ingredient cost, June 1969 - \$54.54/ton	